

Agenda – Pwyllgor Diwylliant, y Gymraeg a

Chyfathrebu

Lleoliad:	I gael rhagor o wybodaeth cysylltwch a:
Ystafell Bwyllgora 2 – y Senedd	Steve George
Dyddiad: Dydd Iau, 30 Mawrth 2017	Clerc y Pwyllgor
Amser: 09.30	0300 200 6565
	SeneddDGCh@cynulliad.cymru

Rhag-gyfarfod anffurfiol

(09:15 – 09:30)

1 Cyflwyniad, ymddiheuriadau, dirprwyon a datgan buddiannau

2 Dyfodol S4C – Sesiwn dystiolaeth 5

(09.30–10.30)

(Tudalennau 1 – 23)

Simon Curtis, Trefnydd Cenedlaethol a Rhanbarthol Cymru a De-orllewin Lloegr,
Equity

David Donovan, Swyddog Cenedlaethol Cymru, BECTU Cymru

Siân Gale, Cadeirydd Cangen Llawrydd De Cymru, BECTU Cymru

3 Dyfodol S4C – Sesiwn dystiolaeth 6

(10.30–11.15)

Glyn Mathias a Hywel William, Aelodau o Bwyllgor Cyngori Ofcom ar gyfer Cymru

4 Dyfodol S4C – Sesiwn dystiolaeth 7

(11.15–12.15)

(Tudalennau 24 – 38)

Ron Jones, Cadeirydd Gweithredol – Grŵp Tinopolis

Nia Thomas, Rheolwr Gyfarwyddwr, Boom Cymru



5 Papur(au) i'w nodi

Ymateb y BBC i argymhellion adroddiad Y Darlun Mawr: Safbwyntiau cychwynnol y Pwyllgor ar Ddarlledu yng Nghymru

(Tudalennau 39 – 41)

Ymateb ITV i argymhellion adroddiad Y Darlun Mawr: Safbwyntiau cychwynnol y Pwyllgor ar Ddarlledu yng Nghymru

(Tudalennau 42 – 49)

Ymateb Ofcom i argymhellion adroddiad Y Darlun Mawr: Safbwyntiau cychwynnol y Pwyllgor ar Ddarlledu yng Nghymru

(Tudalennau 50 – 55)

Gohebiaeth gan Bethan Jenkins, Pennaeth Cerddoriaeth, Ysgol Lewis: Ariannu addysg cerddoriaeth a mynediad ati.

(Tudalennau 56 – 57)

Rhagor o wybodaeth gan Gyngor Bwrdeistref Sirol Conwy: Ariannu addysg cerddoriaeth a mynediad ati.

(Tudalen 58)

Rhagor o wybodaeth gan David Barnard, Undeb y Cerddorion: Ariannu addysg cerddoriaeth a mynediad ati.

(Tudalennau 59 – 141)

6 Cynnig o dan Reol Sefydlog 17.42 i benderfynu gwahardd y cyhoedd o'r cyfarfod ar gyfer eitem 7 ac 8

7 Ôl-drafodaeth breifat

(12:15 – 12:30)

8 Strategaeth newydd Llywodraeth Cymru ar gyfer y Gymraeg: ystyried yr adroddiad drafft

(12.30–13.00)

Eitem 2

Mae cyfyngiadau ar y ddogfen hon

BACKGROUND

- 1) Equity has been heavily involved in the development of the independent production sector in the Welsh language since the inception of S4C in 1982 and we have been very clear about our role to make sure the rewards to those who make the programmes are commensurate with actors across the UK doing similar work. We have never believed that the workforce at S4C should be the poor relations of the broadcasting industry.
- 2) Having said that we have also been realistic about the resources available to the channel and to their strategic objectives. This has in practice resulted in a regular readjustment of the contractual relationship between the independent sector and performers and we believe we have at all times behaved responsibly. We feel that this has shown a continuous commitment to the success of the channel.
- 3) We have on a number of occasions cautioned S4C against what we perceive to be unrealistic expansion of programme making given their inability to expand income. This was most noticeable over the huge increase in hours in the lead up to analogue switch over. The quality of programme making in this circumstance could not be maintained and resulted in what we felt was a downward spiral of standards and consequentially audiences, leading in the end to the crisis of confidence in 2010 which is well documented and made the channel susceptible to attack from central government which probably resulted in assisting decisions to bring S4C under BBC funding.
- 4) Along the way there have been a number of areas where we believe S4C had over committed. The obvious one is in the number of broadcast hours. We recommended that this be scrutinised as part of the long term strategy but this was flatly rejected. This has led to an over dependence on the use of repeats in filling the schedule.
- 5) We also believe that the reluctance of S4C to see the unions as stakeholders in the service is bluntly insulting. Given the support and assistance given by all the unions over the last 30 years and given that it off the back of our

members that the main success of S4C can be measured we feel we should have such a status.

General Question Areas

1. What sufficient funding for the channel looks like? For example, who should provide it, and how should it be calculated – should it be linked to a formula? How should this be supplemented with revenue raised by S4C?

It is almost impossible to put an exact figure on exactly what is sufficient. In an ideal world the funding would be returned to pre-2010 levels and would not be supplied by the BBC License Fee, but this does not take into account how the broadcasting landscape has changed in these times of austerity and the continual cuts in funding to the broadcaster from both the license fee and direct DCMS funding.

In the absence of any developed alternative Equity continues to support the Licence Fee as the most appropriate funding method for the BBC, and therefore S4C. It provides a direct link between licence fee payers and S4C, it provides sustainable and predictable funding, maintains the independence of the S4C from Government and enables the S4C to produce programming that other services would not fund. We do believe that there is a disparity between the inflationary increases built into the BBC Charter for the License Fee and the fixed funding of S4C for the initial 5 years and we hope that the long overdue Westminster review into S4C will address that situation.

2. What S4C's statutory remit should be. Is its current remit fit for a contemporary broadcaster, and if not, how should it change? How should it reflect the digital role of a modern broadcaster?

We believe S4C should be:

- *A National Broadcaster committed to continued investment & programming throughout Wales*
- *A Modern Broadcaster committed to on-screen diversity that reflects modern Wales*
- *A Universal Broadcaster committed to maintaining a universal service funded by the licence fee*

- *A Trusted Broadcaster independent from government*
- *A Quality Broadcaster committed to original TV and radio drama, comedy, entertainment and children's programming*
- *A Responsible Broadcaster committed to fair pay and conditions for the people working for it.*

Equity supports the continuance of S4C as a broadcaster that provides a wide range of different types of content and programmes, for a wide range of different audience groups. Our members work across a range of S4C content including drama, comedy, entertainment and children's programming.

We believe that S4C could do more to address the portrayal of underrepresented groups and would suggest that the public purposes are modified in order to address on screen diversity as a priority.

Equity also believes that S4C should continue to make content available free at the point of use, on as wide a range of platforms as possible. In the changing context of the modern audiovisual industry, where audiences are fragmenting and younger viewers demonstrate a strong desire to consume content online it is imperative that S4C is able to innovate and adapt its delivery mechanisms.

S4C has made full use of both CLIC and its recent inclusion on the BBC iPlayer and Equity has been party to the launch of such services through the negotiation of agreements with both the BBC and S4C for rights clearances. The experience of reaching such agreements has challenged established methods of working and negotiating but we would continue to support S4C in developing platforms for delivery of their programmes.

3. What governance and accountability structures S4C should have in place. For example, should responsibility for S4C be devolved to Wales?

We do not believe that Broadcasting should be devolved to Wales and it would make no sense to just devolve responsibility for S4C in isolation. We believe, however that there needs to be input and monitoring from the Welsh Government into how the S4C and the broadcast industry serves Wales.

One of the outcomes of the Task and Finish Group into Media in Wales in 2012 was that the Broadcasting Advisory Panel would continue to monitor and advise Welsh Government about devolving broadcasting. There has been no report from this advisory panel to date. There does not seem to be an appetite from the Welsh Government for this to happen now, however every alternative should be explored to make sure that the Future of S4C is secured and, more importantly, the financial security of S4C is guaranteed going forward. Our priority would be to support the most appropriate option – which is currently to support the status quo subject to the Westminster Review.

4. What S4C's relationship with the BBC should look like.

Equity believes the current relationship is the correct one. S4C should remain fully independent of the BBC save for its statutory commitments outlined in the Framework Agreement between the two parties. The provision of funding going forward is secured subject to the Westminster review of S4C and we commented earlier on what we would like to see with regards to an increase in that provision.

5. The visibility of S4C: covering issues such as S4C's prominence on the electronic programme guides and smart TV's.

We do not feel it is within our remit as a Trade Union to respond to this question.

Equity would be happy to provide oral evidence to support our position on this matter along with further written background information should the Committee find this useful.

Simon Curtis
National Organiser for Wales

Background

1. BECTU is the largest sector of the trade union Prospect and represents 2,500 workers in production, craft and technical roles in broadcasting, film, theatre, live events and digital media in Wales.
2. As a trade union BECTU actively champions the industry in Wales including promoting and defending Welsh and English language programming and highlighting the key role of the media in portraying the cultural and real life experiences of Welsh citizens in our communities, both within Wales and beyond.
3. BECTU provided a comprehensive response to a consultation undertaken by the former Communities, Equality and Local Government Committee of the National Assembly for Wales (NAFW), 2011. Much of that evidence is relevant to this enquiry into S4C.
<http://www.senedd.assembly.wales/documents/s4718/Consultation%20Response%20-%20Media%2032%20-%20BECTU.pdf>

What sufficient funding for the channel looks like. For example, who should provide it, and how should it be calculated – should it be linked to a formula? How should this be supplemented with revenue raised by S4C?

4. S4C is the only Welsh language television channel in the world. It was launched in 1982 following years of campaigning by Welsh speakers for a dedicated Welsh language channel. This led to the development of the largest independent TV production sector outside of London. It was a time of optimism and significant collaboration between the broadcaster, the employers and the unions. BECTU fears that this is now being dismantled.
5. Our concerns regarding poor decisions made by S4C management and Authority around its digital policies are well documented, in particular that the large number of small niche independent production companies based around Wales were rejected in favour of bulk commissions from five companies that received significant investment

from S4C in return for smaller programme budgets. This undermined the wide range of diverse, high quality and innovative programmes that resulted in a very successful Animation sector, world class film production including an Academy Award nomination, and a dynamic and vibrant pop music scene.

6. The emergence of these fewer, larger companies undermined union recognition as they refused to accept the union's right to represent "staff" workers who were recruited usually on fixed term contracts to replace the predominantly fairly paid freelance workforce. The workers within these organisations usually received pay rates significantly below the TAC/BECTU Agreement and often worked considerably longer hours for no additional pay or time off in lieu. The cuts also had a detrimental impact on the members of our sister unions, Equity and the Musicians' Union, who represent the industry's 'on screen' talent. The significant reduction in programme budgets led to a loss of opportunity and earnings for workers in the sector throughout Wales, a sharp decline in quality which resulted in falling viewing figures and a reputational loss for the Channel.
7. In 2010 the then UK Coalition Government, without any consultation with the people or organisations in Wales, decided to cut the channel's budget by over 36% and announced that the vast majority of its remaining funding would be provided via the BBC's licence fee. The BBC was forced to agree to fund the BBC as well as absorbing some of the costs of funding the BBC World Service and paying the licence fees of the over 75s. (Note that the UK Government has since agreed to provide additional funding for the BBC World Service).
8. BECTU believes that the substantial cuts to S4C were unjustifiable and feels that this demonstrates that the UK Government views Wales as an easy target in terms of inflicting larger than average cuts to our only Welsh language broadcaster. This has been demonstrated again recently when the Department for Culture, Media and Sport announced that it proposed to cut a further £700,000 next year from its already small contribution of £6.762 million to S4C's budget, an announcement made prior to its promised imminent review of S4C. At the same time

it announced consultation on a “contestable fund” of £60 million that could include funding for the Nations and Regions.

9. BECTU is extremely concerned that the half-hourly cost of producing an S4C production has dropped to £10,800, this compares with an average hourly spend of £48,884 in 2006.
10. S4C management and authority have decided to move the broadcaster’s head office to Carmarthen. BECTU has reservations regarding this re-location firstly, the staff were not consulted prior to S4C’s public consultation, this has left many to feel disheartened and uncertainty over the future of the Channel means that few welcome the proposal. Secondly, we believe that a nation’s broadcaster should have its head office in its capital city with excellent communication links. We also believe that the 80% of the channel’s budget currently spent on programming should be available to independent producers throughout Wales ensuring that the channel is representative of its communities and can provide fresh and innovative ideas for the channel and work for creative workers across Wales ideally enabling innovative, creative hubs to develop.
11. BECTU believes that Wales needs an open and inclusive national debate on the future of Welsh language broadcasting and digital media that involves a broad range of stakeholders from the public, industry, academia, politicians and civic society. We welcome Cymdeithas yr Iaith’s efforts in starting a discussion on this crucial topic. The discussion could look at what is required in terms of Welsh language broadcasting and digital services? What it would cost? and what funding mechanisms could supplement essential public funding?
12. Our aim would be for a funding formula that takes us at least to the equivalent levels of finance available in 2010 for TV production and that additional funding for other areas e.g. radio and digital services, should come from elsewhere, the logic being that once austerity is over, given that this is the reason given for the cuts, funding for our only Welsh language TV should be re-instated.
13. Independent research has already demonstrated that every £1 spent on S4C results in a benefit of £2.09 to the Welsh economy, which in itself

demonstrates a low risk to public funds resulting in an excellent return on investment in the creative economy. The creative industries are the largest growing sector in the UK, why should it be treated less favourably than the automotive industry which has recently been promised significant investment from the UK Government?

What S4C's statutory remit should be. Is its current remit fit for a contemporary broadcaster, and if not, how should it change? How should it reflect the digital role of a modern broadcaster?

14. Much of this question answered above – see note on consultation. As a public service broadcaster, S4C alongside BBC Cymru Wales supports the infrastructure for a strong, vibrant TV, Film, Digital and wider creative industry in Wales. Many of the skills required within TV and Film are transferable to Theatre e.g. writers, directors, performers, musicians and craft and technical roles. However it is crucial that these workers, both staff and freelance, receive fair terms and conditions and that the industry is accessible to all from new entrants to the existing workforce.
15. BECTU is concerned that due to ongoing redundancies at S4C and the BBC the broadcasters are losing skilled and talented individuals, many of whom are retiring from the industry before they are able to pass on their skills and expertise to the existing and new workforce. Permanent roles are being replaced by casual employees and freelance workers and responsibility for training and development and other in work benefits are being transferred from the employer to the worker. With such a growing sector in Wales this could have long term implications for future spending potential and wellbeing of the workforce e.g. low pensions, access to mortgages etc.
16. BECTU alongside its sister unions – Equity, the Musicians' Union and the Writers' Guild of Great Britain organise the training and development of industry workers through the CULT Cymru project supported by the Welsh Government's Wales Union Learning Fund, this enables industry workers to access affordable, relevant training at a local level that will help them to survive and thrive in a rapidly changing industry. The project also supports those facing redundancy including at S4C, by informing them of initiatives such as React funding to enable them to return to employment as soon as possible including self-employment.

17. Over half of our members are freelance/sole traders, casual workers or run their own limited companies, this means that the role of the union as a lifelong ally in terms of employment support and career development is particularly important.

What governance and accountability structures S4C should have in place. For example, should responsibility for S4C be devolved to Wales?

18. Although BECTU has deep concerns regarding the actions of UK Governments we do not feel that the NAFW is ready at this stage to take on the responsibility for broadcasting. Firstly, the limited numbers of Assembly Members means that it is difficult for them to sufficiently undertake the responsibilities they already have combined with the additional burden of Brexit, and secondly, unless the funding was vigorously ring fenced there is a danger that Welsh language broadcasting would compete with other areas such as Health, Education and Social care for funding which could be difficult to manage.
19. BECTU feels that the NAFW has a crucial role in terms of scrutinising S4C both in terms of its services to the public but also fair treatment of industry workers including fair pay, terms and conditions, diversity and training and development. BECTU would welcome meaningful discussions with the NAFW and the Welsh Government regarding S4C and the creative industries in general including proposals for Creative Wales.

What S4C's relationship with the BBC should look like.

20. S4C should remain independent from the BBC both in terms of editorial content and management.

1. Rhagarweiniad

1.1 Mae'r Pwyllgor wedi cydnabod y materion sy'n wynebu S4C, sut mae cyllido a llywodraethu'r Sianel ond, rydym yn credu y dylai'r materion yma gael eu hystyried mewn cyd-destun ehangach. Mae'r cyflwyniad hwn felly, tra'n ymdrin â'ch gofynion manwl lle bo hynny'n berthnasol, yn delio ar y cyfan â materion ehangach rydym yn gwahodd y pwyllgor i'w hystyried.

1.2 Sefydlwyd S4C i ddarparu gwasanaeth teledu yn Gymraeg. Ond, mae symlrwydd y disgrifiad yma yn cuddio'r rhwydweithiau cymhleth o wleidyddiaeth a thensiwn cymdeithasol a arweiniodd at ei greu. Fe dderbyniodd llywodraeth y DU yn y pen draw bod angen gwneud iawn am farchnad oedd yn methu ac fe gafwyd ateb oedd yn parchu hawliau siaradwyr Cymraeg i gael eu bywydau wedi eu cynrychioli a'u portreadu yn well ar brif gyfrwng gweledol y cyfnod.

1.3. Mae'r cyfryngau heddiw yn edrych yn wahanol iawn. Yn y byd digidol sydd ohoni, mae cynnyrch print, sain a fideo yn rhannu'r un platfformau dosbarthu. Mae'r rhan fwyaf o'r rhyngweithio rhwng y llywodraeth, cyrff cyhoeddus, y sector breifat ac unigolion bellach yn ddigidol. Mae cyfryngau cymdeithasol wedi datblygu i fod yn flanced sy'n cael ei thaenu dros bob agwedd o fywyd cymdeithasol a diddordebau pobl. Mae'r cymunedau digidol sy'n ymddangos wedi creu byd newydd lle mae'r teledu yn gorfod brwydro am ei le.

1.4. Mae platfformau digidol wedi golygu trefn byd newydd o ran cynnwys. Mae globaleiddio wedi arwain at gewri busnes newydd sy'n annhebyg o ystyried anghenion Cymru, heb sôn am yr iaith Gymraeg. Mae datblygiadau digidol yn cynnig cyfleoedd i gyflwyno cynnwys a thyfiant economaidd. Mae angen sefydlu strwythurau sy'n rhoi llais digonol i Gymru yn y datblygiadau yma.

1.5 Byddai'r ffactorau yma yn unig yn golygu y byddai'r S4C a sefydlid heddiw yn annhebyg iawn i'r un sydd gennym. Rydym o'r farn bod yr adolygiad yma yn gyfle i greu corff newydd gwell sy'n gymwys i'r oes

ddigidol, gan gyfuno gwasanaethau presennol Cymraeg eu hiaith a gwasanaethau sy'n cael eu cyllido gan lywodraethau Cymru a'r DU.

2. Cylch Gwaith S4C

2.1. Rydym yn credu mai prif orchwyl S4C ddylai fod creu cynnwys i ddarparu gwasanaeth i siaradwyr Cymraeg ac wrth wneud hynny gynnal a meithrin yr iaith Gymraeg a'r cymunedau. Nid yw ei strwythur, cyrhaeddiant na'i adnoddau presennol yn gymwys i'r swyddogaeth honno. Mewn byd digidol nid yw'r teledu ei hun yn ddigon.

2.2 Mae gan y llywodraeth strategaeth ar gyfer yr iaith Gymraeg sy'n cael ei derbyn yn gyffredinol ar hyd a lled Cymru. Mae hyn yn cadarnhau ein bod yn wlad ddwyieithog ac mae angen cefnogaeth a hwb ar yr iaith Gymraeg er mwyn i'r iaith allu chwarae rhan briodol ym mhob agwedd o fywyd Cymru. Mae'r hen frwydrau dros yr hawl i ddefnyddio'r Gymraeg mwy neu lai yn rhan o'r gorffennol ac yn codi eu pen yn bennaf pan fo anghydfod am beth sy'n bosib i'w gyflawni. Mae addysg cyfrwng Gymraeg wedi bod yn llwyddiant oherwydd y dewisiadau gan rieni, y rheiny nad ydynt yn siarad Cymraeg yn gymaint â'r rheiny sy'n rhugl.

2.3 Y byd digidol yw'r diwylliant byd eang cyntaf ac mae'n creu amgylchfyd sy'n creu trafferthion i bob iaith. Saesneg yw iaith yr oes ddigidol ac mae'n cael effaith ar bob iaith yn enwedig y rheiny nad ydynt yn hanesyddol yn cael eu hystyried yn ieithoedd rhyngwladol. Nid gwasanaethau cyfrwng Cymraeg yn unig mwyach sy'n dioddef o fethiant yn y farchnad. Fodd bynnag, mae angen atebion newydd i'r methiannau yna heddiw.

2.4 Mae'n llywodraethau wedi gweld yn angenrheidiol ac yn dda i roi cymorth ariannol i ystod eang o wasanaethau a chynhyrchion Cymraeg. Mae'r rhain yn cynnwys teledu, radio a ffilmiau, llyfrau, papurau newydd, yr Urdd, deunyddiau addysgol a'r celfyddydau. Rhoddwyd cyllid i fentrau cymunedol hefyd, yn arbennig y Mentrau Iaith.

2.5 Credwn fod yna ddadl dros ddwyn ynghyd y gosod strategaeth, cyllido a chyflwyno'r cynhyrchion a'r gwasanaethau hyn. Byddai'r strategaeth hon a fyddai'n fwy cydlynol yn gwasanaethu anghenion y Cymry a'r iaith yn well. Gall amrywiaeth y ffynonellau cyllid a'r gwahanol ofynion o ran llywodraethu

greu anawsterau ond anawsterau gwleidyddol fyddai'r rheiny'n bennaf yn hytrach na rhai ymarferol.

2.6 Mae sawl maes y gellid ystyried eu cynnwys yma:

Nid yw cael S4C yn gofalu am deledu a'r BBC yn gofalu am Radio Cymru yn gwneud dim synnwyr a dylai'r ddau wasanaeth ddod ynghyd o dan S4C.

Mae'r diwydiant ffilm Cymraeg yn cael ei gefnogi'n uniongyrchol lle'n briodol gan Lywodraeth Cymru fel rhan o'i strategaeth economaidd ehangach ar gyfer ffilm. Mae'n ddealladwy mai dim ond yn achlysurol iawn y gellir gwneud achos economaidd dros ffilmiau Cymraeg eu hiaith a byddai S4C newydd mewn lle gwell i benderfynu pa brosiectau sy'n haeddu cefnogaeth.

Caiff deunydd clyweledol arall, am resymau hanesyddol, gefnogaeth gan Gyngor Celfyddydau Cymru.

Bu'r Papurau Bro ymhlith y cynlluniau mwyaf llwyddiannau o ran yr iaith Gymraeg yn y blynyddoedd diwethaf. Gallai strategaeth ddigidol a chefnogaeth ganolog i'r cynnwys fod y cam mawr nesaf i'r sector hon. Mae'r Papurau Bro wedi'u gwreiddio yn ein cymunedau ac felly y dylent aros ond gyda chymorth gallent fod gymaint yn fwy llwyddiannus.

Mae Cyngor Llyfrau Cymru wedi methu â chyflwyno strategaeth ddigidol gydlynol a gallai gael ei le yn hawdd mewn corff newydd. Bu llyfrau a phapurau newydd Cymraeg yn araf yn symud i'r cyfrwng digidol. Mae hyn yn annerbyniol mewn diwydiannu lle mae systemau dosbarthu'r dyfodol yn ddigidol. Mae'r potensial i wella traws-hyrwyddo a chydlyniant mor fawr fel bod angen gweithredu ar frys.

Mae'r systemau addysg i gyd yn symud tuag at y defnydd o gynnwys digidol a chlyweledol. I'r iaith Gymraeg, bydd costau ac anawsterau darparu cynnwys o safon cystal â'r Saesneg yn mynd yn broblem gynyddol. Yn y cyfamser, mae S4C ers blynyddoedd wedi cael llwyddiant mawr gyda rhaglenni i'r plant iau ond yn gyffredinol nid yw'r cynnwys hwnnw'n rhan o'r cwricwlwm ysgol. Yn y cyfamser mae Lywodraeth Cymru'n comisiynu cynnwys addysgol fe y bo'r angen i ddiwallu ei anghenion. Mae'r potensial i gydlynu yma yn amlwg ond gall fod yn fwy cost-ffeithlon ac yn cynnig cynnwys gwell pe bai'r S4C newydd yn gorfod darparu cynnwys sy'n fwy agos at y maes llafur, ac yn cael cyfrifoldeb dros gomisiynu cynnwys addysgol arall hefyd.

Mae Cyngor y Celfyddydau yn chwarae rhan amlwg yn y celfyddydau Cymraeg. Serch hynny, mae'r celfyddydau yn gonglfaen pwysig i'r diwylliant Cymraeg ei iaith ehangach hefyd ac eto byddai ymagwedd gydlynol yn gallu cyflwyno manteision yn y tymor hir. Er enghraifft, mae llawer o'r celfyddydau yng Nghymru yn y byd amatur ac yn cael eu cyflwyno gan grwpiau lleol drwy eisteddfodau, yr Urdd a'r Mentrau Iaith. Mae S4C eisoes yn bwysig iawn o ran arddangos a hyrwyddo'r digwyddiadau hyn. Pam na all ei gylch gwaith gynnwys y materion hyn, eu strategaeth a'u cyllid.

Rydym yn ffodus fod corff cyhoeddus yn bodoli'n barod, sef S4C, a all esblygu i gynnwys y meysydd eraill hyn yn ei gylch gwaith.

3. Llywodraethu

3.1 Ar yr olwg gyntaf mae'n ymddangos fod materion llywodraethu dybryd o anodd i ddelio â nhw wrth greu corff newydd ar hyd y llinellau a ragwelwn. Ond credwn mai arwynebol ar y cyfan yw'r pryderon am lywodraethu ac y gellir ymdrin â nhw'n gymharol hawdd.

3.2 Nid yw'r hyn sydd gennym ar hyn o bryd yn gweithio'n dda beth bynnag. Nid yw setliad datganoli presennol y DU wedi cynnwys trefniadau boddhaol ar gyfer rheoli gwasanaethau Darlledu Gwasanaeth Cyhoeddus (DGC). Ni chafodd y llywodraethau datganoledig newydd eu cydnabod na'u cynrychioli. Nid oes unrhyw sefydliad darlledu wedi bod yn uniongyrchol atebol i bobl Cymru.

3.3 Ychydig iawn o ystyriaeth o effaith darlledu gwasanaeth cyhoeddus y mae'r trefniadau llywodraethu presennol yn eu cymryd o gynifer o elfennau o fywyd Cymru – yn wleidyddol, diwylliannol, addysgol ac economaidd – y mae Llywodraeth Cymru â chyfrifoldeb drostynt. Nid oedd y trefniant hwn yn gynaliadwy. Mae'r achos dros ail-gyflunio pwerau a chyfrifoldebau i roi mwy o lais i bobl Cymru i benderfynu ar ofynion a monitro cyflawni DGC yng Nghymru wedi'i gydnabod bellach, o leiaf yn achos y BBC gyda'r Siarter newydd.

3.4 Nid yw darlledu wedi'i ddatganoli ac nid oes consensws gwleidyddol i wneud hynny. Mae'r cyllid i'r gwasanaethau a'r cynhyrchion a restrwn uchod yn amrywiol a chymhleth. Caiff ei gyflenwi gan ddwy lywodraeth, y BBC a gan

weithgareddau masnachol. Darperir y cyllid drwy drefniadau tymor hir megis ffi trwydded y BBC a chyllid tymor byr sy'n amrywio mewn hyd a sicrwydd gan y Llywodraeth ganolog a nifer o adrannau Llywodraeth Cymru, weithiau gan gyrff hyd braich fel Cyngor Celfyddydau Cymru a Chyngor Llyfrau Cymru. Mae gan Ofcom rôl hefyd fel rheoleiddiwr.

3.5 Nid oes raid i ddatod y buddiannau gwahanol hyn fod yn broblem fawr ac os yw'r strwythurau iawn yn cael eu gosod yn eu lle, gellir cyflwyno elfennau gwahanol y corff newydd yn raddol dros amser.

3.6 Fel y mae ar hyn o bryd, mae gan S4C broblemau llywodraethu sydd angen eu datrys ar frys. Mae'r trefniadau presennol rhwng y DCMS, y BBC, Ofcom, Llywodraeth Cymru ac S4C yn cael eu trafod oherwydd bod angen trafodaeth gyhoeddus am weithredu Siarter newydd y BBC ac mae'r DCMS wedi ymrwmo i gynnal adolygiad pellgyrhaeddol o S4C.

3.7 Ni ddylid gadael i'r un o'r trafodaethau hyn anwybyddu'r angen am gyllid digonol a chynaliadwy i wasanaeth teledu S4C. Cynnwys teledu traddodiadol, sut bynnag y'i dosberthir, fydd prif ffordd pobl o gael cynnwys am y dyfodol rhagweladwy. Bydd gwasanaeth teledu Cymraeg ei iaith yn aros wrth galon diogelu, cynnal a datblygu'r iaith.

3.8 Ar hyn o bryd daw cyllid i S4C gan drwydded y BBC, y DCMS, gweithgareddau masnachol S4C a'i gronfa fasnachol, a adeiladwyd o fuddsoddiadau masnachol blaenorol. Er bod lefel y cyllid yn mynd i aros yn bwnc llosg, nid yw'r ffynhonnell yn creu unrhyw gyfrifoldebau neu anawsterau llywodraethu y tu hwnt i'r rheiny sydd gennym yn barod. Eisoes mae materion llywodraethu sy'n effeithio ar y berthynas rhwng llywodraeth y DU, Llywodraeth Cymru, Ofcom a'r BBC sydd angen eu trafod a'u datrys.

- Mae rôl aelod Bwrdd newydd y BBC i Gymru yn dra gwahanol i sut yr oedd o dan y trefniadau blaenorol. Mae'n fwy na phwynt arwynebol fod y person yn cael ei benodi gan y Frenhines yn y Cyfrin Gyngor. Mae gan Lywodraeth Cymru ran yn y broses benodi ac mae'n rhaid i'r penodiad gael ei gymeradwyo gan Weinidogion Cymru yn ogystal â'r DCMS. O dan y Siarter newydd mae rhwymedigaethau corfforaethol newydd gan y BBC i Gymru. Mae yna hefyd gyfrifoldebau unigol i'r aelod Bwrdd newydd o ran y llywodraeth hon a'r Cynulliad. Rhagwelir gwrthdaro rhwng cyfrifoldebau'r unigolyn i Gymru ac i'r BBC drwy'r

trefniadau hyn er nad oes ateb hawdd wedi cael ei awgrymu. Bydd y gweithio agos a'r berthynas gyllido rhwng y BBC ac S4C yn cyfrannu at y gwrthdaro cyfrifoldebau yma.

- Bydd gan Ofcom gylch gwaith penodol Gymreig hefyd yn cwmpasu rheoleiddio traddodiadol a bellach yn sicrhau fod y Drwydded Wasanaeth i Gymru yn cael ei chyflwyno gan y BBC. Bydd yr ail elfen yn ymestyn, er enghraifft, i sicrhau fod y BBC yn dwyn buddion economaidd i Gymru fel ag yr addawyd gan y BBC. Mae'n debyg y bydd angen cymryd agwedd debyg gyda S4C fel rhan o'i drefniadau cyllido a bydd angen i Ofcom fonitro hyn.
- Gydag ymagwedd ymgynghorol a rheoleiddiol i Drwyddedau Gwasanaeth y BBC, nid yw'n ymarferol fod y materion hyn o safbwynt gwasanaethau'r iaith Gymraeg yn cael eu gadael yn llwyr i Awdurdod S4C. Nid oes ond angen ystyried beth allai fod gofyn i'w gwasanaethau eu gwneud i ddangos hyn. Gallai'r rhain gynnwys:
 - Nifer yr oriau darlledu ar y teledu sydd eu hangen i gynnal gwasanaeth llawn
 - Y mathau o raglenni i'w gwneud, yn ôl genre, o bosibl
 - Diffinio'r gwasanaethau newyddion a materion cyfoes sydd eu hangen
 - Gwasanaethau ar-lein
 - Portreadu pobl ledled Cymru
 - Gofynion effaith economaidd
 - Ymrwymadau i hyfforddi a datblygu sgiliau yn y diwydiant
 - Ymrwymadau ynghylch y berthynas rhwng y gwasanaethau a'r system addysg yng Nghymru.
 - Ymrwymadau ynghylch y berthynas rhwng gwasanaethau S4C a pholisi Llywodraeth Cymru (a rhwymedigaethau cyfraith ryngwladol y DU) o ran hyrwyddo a diogelu'r iaith Gymraeg

4. Casgliad

4.1 Yn y dyfodol rydym yn mynd i weld ymagwedd lywodraethu lawer mwy haenog i ddarlledu ac mae'r cwestiwn a fydd yn cael ei datganoli'n ffurfiol yn llai pwysig nag y mae pobl yn credu. Bydd y strwythurau sydd yn eu lle yn barod yn gofyn i lywodraethau Caerdydd a Llundain, y BBC a S4C, ddod o hyd i ffyrdd newydd o weithio.

4.2 Mae cadw'r trefniadau llywodraethu sydd eu hangen gan y llywodraeth ganolog, y BBC yn ganolog ac Ofcom a chydbwyso hyn ag anghenion llywodraethu Cymru eisoes yn broblem p'un ai bod S4C yn aros fel y mae neu'n datblygu'n gorff sy'n fwy perthnasol i anghenion ehangach Cymru.

4.3 Mae S4C wedi ei ailstrwythuro sy'n atebol mewn ffordd wahanol efallai i'w amrywiol gyllidwyr a rheoleiddwyr, ei ddau noddwr llywodraeth ac i bobl Cymru, yn bosibl. Gallai corff o'r fath sy'n cydlynu strategaethau a gofynion ei randdeiliaid fod yn drawsnewidiol wrth gau'r bylchau sy'n ymddangos rhwng yr iaith Gymraeg a'r byd modern. Nid yw teledu yn ddigon mwyach. Nid yw S4C fel y mae yn ddigon mwyach. Mae pawb sydd wrthi'n trafod y materion hyn yn honni eu bod yn gweithio i gael y gwasanaethau gorau posibl i Gymry Cymraeg ac i Gymru. Mae'r ateb gorau yn golygu dwyn ynghyd strategaeth, gwasanaethau a chynhyrchion, cyllid a llywodraethu.

Pwyllgor Diwylliant, y Gymraeg a Chyfathrebu Cynulliad Cenedlaethol Cymru

Ymchwiliad i ddyfodol S4C

Tystiolaeth Boom Cymru

Mae Grŵp Boom Cymru, sydd erbyn hyn yn rhan o ITV Studios, yn gyfuniad o wahanol gwmnïau a sefydlwyd dros y blynyddoedd i ymateb i ofynion S4C. Ein busnes yw creu cynnwys mewn gwahanol feysydd i wahanol ddarllenedwyr a'n prif gwsmer yw S4C. Rydym hefyd yn cynhyrchu cynnwys ar gyfer y BBC.

Mae pencadlys Boom Cymru wedi ei leoli yn adeilad y Gloworks, ym Mae Caerdydd, ac mae Adran Blant y cwmni yn gweithredu o'i stiwdio yn Heol Penarth, Caerdydd.

Yr ydym yn cynhyrchu amrywiaeth eang o gynnwys ar gyfer S4C – Gwasanaethau plant Cyw a Stwnsh; Sianel Pump ar y rhwydweithiau cymdeithasol ar gyfer pobl ifanc; digwyddiadau Cymdeithas Amaethyddol Frenhinol Cymru yn Llanelwedd; Dal Ati ar gyfer Dysgwyr; rhaglenni adloniant a chomedi; cyfresi drama fel 35 Diwrnod; rhaglenni dogfen ac adloniant ffeithiol/nodwedd.

Mae adrannau eraill y Grŵp, sydd hefyd wedi eu lleoli yn y Gloworks, yn cynnwys Boomerang, sy'n cynhyrchu rhaglenni Saesneg ar gyfer Channel 4, Five, ITV a rhwydweithiau y tu hwnt i'r DU; Bait – cwmni graffeg ac animeiddio; a chwmni adnoddau Gorilla sy'n gwasanaethu nifer o wahanol gynhyrchwyr ledled Cymru a'r DU. Mae gweithgareddau'r adrannau hyn yn rhoi cyfleoedd i'n staff talentog i ddatblygu eu sgiliau ar wahanol gynyrchiadau ac i fesur eu hunain yn barhaus yn erbyn safonau cynhyrchu ar gyfer y sianeli rhwydwaith.

Dros y blynyddoedd diwethaf, gyda'r sialens i'w gyllid, rydym ni a chynhyrchwyr eraill wedi cydweithio'n agos mewn partneriaeth gyda swyddogion S4C i sefydlogi'r diwydiant a sicrhau gwerth am arian wrth ddal at y safonau uchaf ar gyfer gwylwyr, ac ymdrechu i hyfforddi a chadw'r talentau gorau yng Nghymru. Credwn fod y bartneriaeth agored hon rhwng y cynhyrchwyr a'r corff ariannu a chomisiynu yn allweddol i S4C yn y dyfodol.

Creu'r amgylchiadau i bobl dalentog i ffynnu yw cyfraniad mawr S4C o'r cychwyn ac mae angen sicrhau fod hynny'n parhau i'r dyfodol. Mae'r sialens o wynebu'r newidiadau pellach mewn arferion gwyllo a chyfathrebu bydd yn digwydd dros y degawd nesaf yn mynnu fod S4C wedi ei arfogi i ymateb. Mae hyn yn golygu:

- ehangu cylch gwaith S4C yn statudol i roi iddo'r hyblygrwydd i ymateb yn gyflym ac yn greadigol i newid yn yr hinsawdd creu a chyfleu cynnwys;
- dull ariannu sy'n rhoi sicrwydd a gwelededd i S4C a'i rhanddeiliaid;
- rhyddid ac annibyniaeth olygyddol, ac
- annibyniaeth i weithredu'n entrepreneuraid, ac i ffrwyth gweithredoedd masnachol gael eu cyfeirio at bwrpas cryfhau'r sefydliad.

Mae dyfodol a phwrpas S4C ynghlwm wrth yr iaith Gymraeg; oherwydd hyn mae angen sefydlu perthynas ffurfiol gyda'r Cynulliad Cenedlaethol i sicrhau ei fod yn chwarae rhan allweddol yn nod y llywodraeth o gynyddu nifer y siaradwyr Gymraeg.

Nid oes gennym farn benodol ar sut i gyflawni hyn, ond dylid ei ddiffinio o fewn cylch gwaith S4C mewn deddfwriaeth er mwyn sicrhau fod iddo flaenoriaeth ym mhenderfyniadau S4C.

Mae'n bwysig hefyd fod S4C yn darlledu a dosbarthu cynnwys Cymraeg y tu hwnt i ffiniau Cymru i ddiwallu anghenion y 'diaspora' Cymraeg. Bellach, mae 45% o gynulleidfa S4C yn gwyllo cynnwys y sianel y tu allan i Gymru.

Mewn cenedl fach, gydag iaith leiafrifol, mae'n hawdd anghofio fod yr arc o farn a diddordeb yr un mor eang â chenedloedd ac ieithoedd mwy eang eu defnydd. Mae adlewyrchu'r blwraliaeth hwnnw ar draws y cyfryngau yn bwysig. Ni ddylai Cymry Cymraeg dderbyn gwasanaeth sy'n eilradd i wasanaethau darlledwyr Prydeinig eraill. Mae gan siaradwyr Cymraeg yr hawl i dderbyn a mwynhau cynnwys o safonau cyfartal â'r hyn a ddarlledir ac a ddosbarthir yn Saesneg. Ni ddylai fod unrhyw wahaniaeth mewn safonau oherwydd bod S4C yn comisiynu cynnwys mewn iaith leiafrifol.

Mae unrhyw fenter yn y diwydiannau creadigol yn dibynnu ar dalentau'r bobl. Yr ydym yn credu'n gryf mewn trefniant sy'n pwysleisio'r bartneriaeth sydd ei hangen rhwng y gwahanol gyrff i gynnal, cefnogi a hyrwyddo'r dalent honno drwy gyfleoedd a hyfforddiant.

Mae Boom Cymru yn awyddus i chwarae rhan yn wynebu sialensiau'r dyfodol mewn partneriaeth gyda S4C.

Ymateb i gwestiynau penodol:

Beth fyddai'n cael ei gyfrif yn gyllid digonol ar gyfer y sianel? Er enghraifft, pwysu ddylai ddarparu'r cyllid, a sut y dylid ei gyfrifo - a ddylid cael fformiwla ar ei gyfer? Sut y dylid cefnogi hyn drwy referniw wedi'i gasglu gan S4C ei hun?

Mae penderfynu ar gyllid digonol yn dibynnu ar gylch gwaith S4C ac nid yw'n synhwyrol pennu swm cyn penderfynu a chraffu'n fanwl ar y cylch gwaith hwnnw. Ond un peth sy'n sicr - ni ddylai'r swm fod yn llai na'r swm presennol am fod S4C eisoes wedi torri costau i'r asgwrn ac ni ellir torri ymhellach heb effeithio ar safonau ac arloesedd.

Ni all S4C gael ei hystyried gan y gynulleidfa yn eilradd i sianeli gwasanaethau cyhoeddus eraill. Dylai cynllun busnes y sianel ar gyfer y degawd nesaf dalu sylw penodol i'r newidiadau cyflym yn y dirwedd darlledu a chyfathrebu digidol, ac mae'n hollbwysig bod S4C yn ymateb yn chwim i'r ymraniad yn y gynulleidfa (audience fragmentation) a rhoi ffocws ar dargedu'r rhychwant yn eu cynulleidfaoedd.

Mae casglu cyllid S4C drwy'r ffi drwydded ar hyn o bryd yn sefyllfa dderbyniol ond ni ddylai rheolaeth o'r swm yma fod yn benderfyniad i'r BBC yn unig. Dylai'r Ysgrifennydd Gwladol ynghyd â Llywodraeth Cymru benderfynu yn dilyn ymgynghori manwl gyda S4C. Mae angen hefyd i adran DCMS Llywodraeth y DU gyfrannu at y costau cyfundrefnol os yw'n parhau i fod â chyfrifoldeb dros S4C a darlledu yn y Gymraeg.

Dylai unrhyw gytundeb ariannu barhau am hyd siarter y BBC ar sail fformiwla sy'n sicrhau cyfran gyson a theg o incwm y ffi drwydded. Byddai hynny'n rhoi gwelededd a sefydlogrwydd i gynllunio ac arloesi ar gyfer y dyfodol.

Dylai S4C fod yn rhydd i gasglu refeniw mewn unrhyw ffordd sy'n briodol i ddarllledwr cyhoeddus i gynyddu'r incwm cyhoeddus, yn yr un modd â Channel 4, er mwyn ariannu cyfleoedd newydd creadigol.

Pa gylch gwaith statudol y dylai S4C ei gael? A yw ei gylch gwaith cyfredol yn addas ar gyfer darllledwr cyfoes? Os nad, sut y dylid ei newid? Sut ddylai'r cylch gorchwyl adlewyrchu swyddogaeth ddigidol darllledwyr modern?

Mae'n ymddangos bod pawb yn gytûn bod cylch gwaith presennol S4C yn anaddas ar gyfer y cyfnod digidol hwn. Fe'i lluniwyd i ymateb i sefyllfa cyn-ddigidol dros 30 mlynedd yn ôl.

Mae'n hanfodol fod y cylch gorchwyl yn adlewyrchu arferion gwyllo a chyfathrebu'r oes ddigidol, ac yn ddigon hyblyg i addasu'n gyflym wrth i dueddiadau a thechnoleg newid dros y degawd nesaf. Dywed James Purnell taw dyma oes aur y defnyddwyr, gyda refeniw Netflix wedi treblu mewn pum mlynedd a'i gyllideb cynnwys yn fwy na holl incwm y BBC. Hefyd, mae 350,000 o linyddau podcast ar gael ar iTunes, sy'n cyfateb i 13 miliwn o benodau unigol. Mwy na allech wrando arnyn nhw mewn hanner can einioes!

Dylai S4C fod mor rhydd i arloesi yn ei weithgareddau ag unrhyw ddarllledwr cyhoeddus arall yn y DU ac ymestyn cyrhaeddiad y cynnwys dros ffiniau daearyddol a llwyfannau dosbarthu. Ond dylai hefyd ymfalchio yn y cynnwys sydd ar y sianel draddodiadol gan roi hyblygrwydd i'r defnyddiwr i wyllo ar alw, neu ar amser penodedig. Mae'r BBC a Channel 4 yn ymestyn eu dulliau dosbarthu i dargedu cynulleidfaoedd penodol – y BBC â 25 o lwyfannau dosbarthu digidol a Channel 4 â 15. Rhaid i gylch gorchwyl S4C ei ganiatáu i fabwysiadu strategaethau tebyg mewn cyfnod o ornest i ddenu gwylwyr.

Dylai'r cylch gwaith hefyd ganiatáu S4C i wneud y gorau o'r posibiladau masnachol er mwyn cynyddu refeniw i alluogi arloesedd a menter yn y byd digidol.

Pa strwythurau y dylai S4C eu cael ar gyfer llywodraethiant ac atebolrwydd? Er enghraifft, a ddylid datganoli cyfrifoldeb dros S4C i Gymru?

Yn amlwg, mae'n rhaid i S4C fod yn atebol i'r corff sydd yn ei ariannu. O ran ei weithredoedd a'i gylch gwaith fel darllledwr, dylai S4C fod yn atebol drwy'r rheoleiddiwr, Ofcom, i Lywodraeth y Deyrnas Unedig.

Fel cynhyrchwyr yr ydym yn croesawu'r eglurder a chysondeb a ddaw o ddefnyddio canllawiau cynhyrchu Ofcom i bob darllledwr ac mae'n fanteisiol i'r cynhyrchydd i gael un rheoleiddiwr cyffredin. Credwn y byddai'n fanteisiol i S4C gael ei reoleiddio o fewn yr un gyfundrefn.

Un posibilrwydd yw i lywodraethiant S4C fod yn debycach i sianeli eraill sy'n cael eu rheoleiddio gan Ofcom gyda Bwrdd effeithiol sy'n cynnwys swyddogion gweithredol a dewisiadau anweithredol. Wrth ddewis aelodau'r bwrdd, dylid cael mewnbwn cyfartal gan Lywodraethau Cymru a'r DU a dylai Ofcom fod yn rhan o'r broses apwyntio. Mae tryloywder yn bwysig ac fe ellid ystyried penodi cynrychiolydd o blith y cynhyrchwyr annibynnol yn ogystal â chynrychiolwyr arbenigol o feysydd eraill yn gyfarwyddwyr anweithredol.

Tra bod cyllid S4C yn dod o ffioedd trwydded ledled y DU, rhaid i'r atebolrwydd darlledu fod o fewn yr un gyfundrefn. Os bydd newid ym mherthynas wleidyddol Cymru a San Steffan, yn amlwg bydd angen ail-ystyried hyn.

Ond mae gan S4C gylch gwaith ychwanegol i'w gyflawni gyda'r cyfrifoldeb at yr iaith Gymraeg a strategaeth Llywodraeth Cymru. Yn hynny o beth mae'r atebolrwydd i Gynulliad Cymru.

Sut berthynas y dylai S4C ei chael â'r BBC?

Rydym o'r farn y dylai'r berthynas rhwng S4C â'r BBC fod yn un hyd fraich rhwng dau ddarlledwr cyhoeddus sydd yn seiliedig ar bartneriaeth. Bydd angen cytuno ar Femorandwm o Ddealltwriaeth newydd i ofalu am gyflenwad rhaglenni BBC Cymru i wasanaethau S4C i adlewyrchu'r gylch gwaith ehangach fydd yn cael ei drefnu. Mae angen cytundeb ar faterion digidol hefyd. Ni ddylai'r prif gytundeb ariannu o'r ffi drwydded fod yn rhan o'r ddealltwriaeth honno.

Mae cyfle i symud ymlaen gyda mwy o gyd-gynhyrchu rhwng S4C a'r BBC (yn ogystal ag ITV a darlledwyr eraill) fydd yn codi safonau cynhyrchu ar sgrin a chaniatáu'r arian i fynd ymhellach. Hefyd, gall fod mwy o gydweithio wrth i'r ddau ddarlledwr ddatblygu technolegau newydd, ac wrth negydu hawliau angenrheidiol (gan gynnwys, er enghraifft, hawliau darlledu chwaraeon). Yn y bôn yr un yw heriau'r darlledwyr cyhoeddus dros y blynyddoedd nesaf ac am fod y ddau yn parchu annibyniaeth olygyddol ei gilydd, mae cydweithio'n bwysig i'r ddau er lles pobl Cymru a'r iaith Gymraeg.

Gwelededd S4C: gan gynnwys materion megis amlygrwydd S4C ar y ddewislen deledu electronig ac ar setiau teledu clyfar.

Mae angen, trwy ddeddf, gwarchod gwelededd i lwyfannau darlledwyr cyhoeddus y Deyrnas Unedig ar yr EPG ar sail yr egwyddor fod angen i bawb allu cyrraedd y cynnwys yn hawdd mewn cyfnod o newidiadau digidol.

Mae'n bwysig fod S4C ei hun yn ei gylch gwaith yn cael y rhyddid i ddatblygu dulliau digidol o hyrwyddo ei hunan er mwyn sicrhau'r gwelededd amlycaf posibl ar y gwahanol lwyfannau ac ar setiau teledu clyfar, fel mae sianeli trwyddedig eraill yn ei wneud yn barod.

Yn rhinwedd paragraff(au) vi o Reol Sefydlog 17.42

Mae cyfyngiadau ar y ddogfen hon



From the Director-General

Mawrth 8fed, 2017

Bethan Jenkins AC
Cadeirydd y Pwyllgor Diwylliant, y Gymraeg a Chyfathrebu
Cynulliad Cenedlaethol Cymru
Bae Caerdydd
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Annwyl Bethan,

Y Darlun Mawr – Safbwyntiau Cychwynnol y Pwyllgor ar Ddarlledu yng Nghymru

Diolch am eich llythyr diweddar ac am gopi o adroddiad manwl y Pwyllgor ar Ddarlledu yng Nghymru.

Yn fy llythyr dyddiedig Chwefror 21ain, rhoddais y wybodaeth ddiweddaraf i chi ar y gwaith rydym wedi bod yn ei wneud i adolygu ein darpariaeth o raglenni a gwasanaethau yng Nghymru. Hefyd, nodais ein cynlluniau i gynyddu ein buddsoddiad mewn rhaglenni Saesneg ar gyfer Cymru o 50% dros y tair blynedd nesaf. Bydd yr £8.5 miliwn ychwanegol o gyllid newydd y flwyddyn yn gwneud gwahaniaeth go iawn ac yn golygu rhaglenni newydd sylweddol i Gymru ar draws ystod eang o genres. Fel rhan o'n cynlluniau ar gyfer Cymru, mae disgwyl i gyfanswm y buddsoddiad mewn gwasanaethau teledu Saesneg gyrraedd bron i £30 miliwn y flwyddyn erbyn 2019/20. Bydd y buddsoddiad hefyd yn rhoi hwb i wasanaethau newyddion yng Nghymru, gyda cynlluniau i roi mwy o sylw i faterion arbenigol ac ehangu'r gwasanaethau symudol ac ar-lein. Caiff manylion y cynlluniau hyn eu cyhoeddi'n ddiweddarach yn y gwanwyn.

Ar gais y Pwyllgor, 'rwy hefyd yn amgáu gwybodaeth am y Gwasanaeth Newyddiadura ar Ddemocratiaeth Leol.

Rwy'n gwybod y bydd rhagor o gyfle i ni drafod y materion hyn yn ddiweddarach eleni.

Dymuniadau gorau,

Tony Hall
Cyfarwyddwr Cyffredinol

Y Gwasanaeth Newyddiadura ar Ddemocratiaeth Leol

Yn dilyn yr Adroddiad ar Ddarlledu gan Bwyllgor Cynulliad Cymru, mae'r Pwyllgor wedi gofyn am ragor o fanylion ynghylch y Gwasanaeth Newyddiadura ar Ddemocratiaeth Leol (LDRS). Yn y papur briffio hwn, ceir crynodeb o'r LDRS ac ymateb i'r materion a godwyd yn adroddiad y Pwyllgor.

Beth yw'r LDRS?

- Bydd yr LDRS yn recriwtio 150 o newyddiadurwyr newydd a fydd yn cael eu cyflogi gan ddarparwyr newyddion lleol ledled y Deyrnas Unedig. Byddant yn trafod sefydliadau a gwasanaethau cyhoeddus lleol nad ydynt yn cael digon o sylw gan y farchnad.
- Bydd y BBC yn ariannu'r LDRS, ond ni fydd yn un o wasanaethau'r BBC ac ni fyddant yn ohebwr y BBC.
- Bydd allbwn yr LDRS ar gael i ystod eang o sefydliadau newyddion (gan gynnwys y BBC) sy'n bodloni cyfres o feini prawf y cytunir arnynt.¹

Beth yw'r rhesymeg dros yr LDRS?

- Mae lles cyhoeddus i gael sector newyddion lleol ffyniannus yn y DU. Mae mwy o ddatganoli a heriau economaidd i'r diwydiant newyddion lleol wedi arwain at lai o ohebu mewn rhai rhanbarthau, yn arbennig o ran rhoi sylw i faterion sy'n ymwneud ag atebolrwydd cyhoeddus a democratiaeth leol
- Nid rôl y BBC yw cefnogi y sector newyddion lleol presennol yn ariannol. Yn hytrach, dros gyfnod y trafodaethau Siarter, datblygodd y BBC gynigion ar y cyd â'r diwydiant i wella'r ddarpariaeth newyddiaduraeth leol ar gyfer pob cynulleidfa ac i geisio lleihau'r bwlch democrataidd. Bydd gwella ansawdd darpariaeth newyddion lleol y DU a chynyddu'r trafodaethau ar faterion lleol nad oes digon o son amdanynt ar hyn o bryd yn sicrhau gwerth i ffi'r drwydded.

Pa gynnwys fydd yr LDRS yn ei gynhyrchu?

- Mae gan ohebwr yr LDRS friff golygyddol penodol i roi sylw i haen uchaf yr awdurdodau lleol gan gynnwys cynghorau sir, awdurdodau unedol a bwrdeistrefi metropolitan. Lle mae hyn yn briodol ac wedi ei gytuno, mae'n bosibl rwydd y gall y gwasanaeth ohebu ar gyfrif cyhoeddus eraill
- Bydd gofyn i ohebwr gynhyrchu cynnwys amlgyfrwng, er y disgwyliad yw mai adroddiadau ar ffurf testun fydd y rhan fwyaf o'r allbwn.

Sut bydd yr LDRS yn gweithio yn ymarferol?

- Mae gan y BBC (yn dilyn ôl ymgynghoriad â'r diwydiant) ddsbarthiad drafft o 139 o ohebwr. Caiff 11 o'r swyddi eu cadw yn ôl er mwyn gallu ymateb i amgylchiadau annisgwyl ar ddiwedd y broses ddyrannu
- Caiff y 139 gohebydd eu bwndelu i 54 o gytundebau rhanbarthol 2 flynedd, a chaiff darparwyr trydydd parti wneud cais amdanynt. Mae modd i unrhyw ddarparwr sy'n bodloni cyfres o feini prawf wneud cais
- Ar hyn o bryd, mae 11 gohebydd wedi eu dyrannu i Gymru, a phob un yn gyfrifol am 2 ardal awdurdod lleol.

¹ Mae'r meini prawf hyn yn sicrhau bod partneriaid wedi ymrwmo i ddarparu newyddiaduraeth leol, ond eu bod yn agored, ond heb fod yn gyfyngedig, i'r sector papur newydd

Peirianwaith i adolygu'r gwasanaeth

- Bydd pob ardal neu wlad yn ffurfio grŵp defnyddwyr er mwyn rhoi adborth ar y gwasanaeth. Bydd yn cael ei gadeirio gan y BBC a bydd ganddo gynrychiolaeth o blith defnyddwyr a darparwyr ar draws y sector
- Bydd grŵp llywio yn cael ei ffurfio i gynorthwyo'r BBC gyda materion sy'n berthnasol i'r gwasanaeth yn gyfan
- Bydd holl gynigion y BBC i bartneriaethau newyddion lleol yn cael eu hadolygu'n flynyddol er mwyn sicrhau bod termau'r bartneriaeth yn cael eu bodloni a bod yr LDRS yn cyflawni'r dibenion a fwriadwyd

Mae adroddiad y Pwyllgor yn mynegi pryder y gallai'r LDRS arwain yn anfwriadol at sefydliadau newyddion lleol yn lleihau eu darpariaeth eu hunain. Mae'n awgrymu math o wasanaeth 'gwifren' yn lle hynny.

- Amcan yr LDRS yw cyfrannu at newyddiaduraeth leol y Deyrnas Unedig. Nid bwriad y BBC yw defnyddio ffi'r drwydded i ariannu gweithgareddau sydd eisoes yn bodoli o fewn y farchnad
- Mae'r BBC wedi gweithio mewn partneriaeth agos gyda'r diwydiant i sicrhau bod y cynnig cyflawni ei rôl gyhoeddus, ei fod o fudd i'r rhai sy'n talu ffi'r drwydded a'i fod yn helpu i gynnal lluosogrwydd yn y farchnad cyfryngau lleol
- Mae prif feysydd y cynnig yn fodd i geisio atal sefydliadau newyddion lleol rhag lleihau eu darpariaeth:
 1. Pwrpas y gwasanaeth yw trafod 'materion nad ydynt yn cael digon o sylw' a llenwi bylchau yn y farchnad o ran gohebu. Bydd yn wasanaeth unigryw sy'n ychwanegu at adnoddau sydd eisoes yn bodoli, yn hytrach na'u disodli.
 2. Bydd yr LDRS yn trafod materion sy'n ymwneud â sefydliadau a gwasanaethau cyhoeddus lleol. Y prif nod yw newyddiaduraeth ar wasanaethau cyhoeddus sydd â llai o werth masnachol.
 3. Rhoddir briff golygyddol wedi'i ddiffinio'n amlwg a chlir i'r gohebwyd. Bydd angen i'r gohebwyd gadw o fewn cwmpas y briff hwnnw a pheidio ymgymryd ag unrhyw newyddiadura arall y gallai eu sefydliad letyol elwa ohono.
 4. Mae'r gwasanaeth wedi'i ddatblygu er budd pob darparwr newyddion lleol cymwys, ac nid er mwyn rhoi mantais i sefydliadau neu sectorau newyddion unigol. Er enghraifft, bydd yr holl ddarparwyr cymwys yn cael cyfle i wneud cais am gytundebau, a bydd cynnwys golygyddol yr LDRS yn cael ei ddsbarthu i'r holl ddefnyddwyr cymwys ar yr un amser.
 5. Bydd dulliau adolygu yn sicrhau bod y gwasanaeth yn cyflawni ei amcanion. Bydd y BBC yn gwahodd adborth ac awgrymiadau gan y diwydiant ehangach ynglŷn â sut i wella'r gwasanaeth.
- Bydd ymgorffori newyddiadurwyr yr LDRS mewn sefydliadau newyddion lleol yn rhoi mwy o werth i'r rhai sy'n talu ffi'r drwydded. Mae'n rhoi hwb i lluosogrwydd ac yn sicrhau bod y manteision yn cyrraedd ystod eang o sefydliadau newyddion lleol. Hefyd, mae'n ddull sy'n sicrhau cydweithio ac yn cefnogi ymrwymiad ehangach y BBC i fod yn bartner mwy agored.
- Ni fydd yr LDRS yn rhoi sylw i lysoedd, fel yr awgrymir yn adroddiad y Pwyllgor, oherwydd ystyrir hynny yn ddefnydd llai gwerthfawr o arian talwyr ffi'r drwydded. Caiff y gwaith hwn ei hepgor hefyd o safbwynt effaith ar y farchnad, am fod rhoi sylw i lysoedd yn ffurf ar newyddiaduraeth sy'n fwy deniadol yn fasnachol.

Eitem 5.2



13th March 2017

Bethan Jenkins AM
Chair
Culture, Welsh Language and
Communications Committee
National Assembly for Wales
Cardiff Bay
Cardiff
CF99 1NA

Dear Bethan,

The Big Picture – Culture, Welsh Language and Communications Committee’s Initial Views on Broadcasting in Wales

Thank you for the opportunity to respond to the committee’s initial views on broadcasting in Wales and to the two specific recommendations that pertain to ITV.

As is clear from the report, broadcasting continues to make an important contribution in the life of our nation. We are proud to be a Public Service Broadcaster (PSB) in Wales, providing, as we do, the only independent, trusted alternative to the BBC’s news and current affairs - one that is universally available, free to viewers and which comes at no direct cost to the taxpayer.

Channel 3 Licence for Wales

We are now in the third year of our ten year licence, delivering on the obligations set by our regulator Ofcom and so providing a degree of certainty around independent news provision for viewers and policy makers alike. The report outlines many of the challenges facing all the PSBs in Wales, including the impact of the reductions in budgets and original programming. Against this backdrop, budgets for ITV Wales PSB programming - and the volume of our PSB production - have remained stable for the last seven years at 286 hours of news and programming each year.

ITV Cymru Wales, 3 Assembly Square, Britannia Quay, Cardiff Bay CF10 4PL

It is clear that ITV's PSB contribution is valued by viewers in Wales. In 2016, share of viewing (SOV) for our flagship news programme, *Wales at Six*, increased by 14% - or by 2.8 percentage points - to 22.6%, the seventh consecutive year of increase. The programme focuses on the national agenda in Wales, with specialist correspondents covering the key devolved policy areas. Recent highlights include our Ford engine plant exclusive; detailed coverage of the winter crisis in Welsh health care; and a special series of reports looking at the challenges and rewards of life in the South Wales Valleys.

The programme is broadcast as a national service across Wales and now regularly attracts 200,000 viewers on weeknights. In a wider context, *Wales at Six* is now the 5th highest performing 6pm news programme of the 14 Nations and Regions services on the ITV Network. In 2016 it had a weekly reach of 516,000 individual viewers, up by 7.5% year-on-year. By contrast, when looking at other sources of commercially funded news in Wales, no London based daily newspapers have a Welsh edition; the daily circulation of the Western Mail is around 15,000 and the weekly reach of Nation Radio in Wales is around 150,000 listeners.

Since the end of the analogue era in 2012 there has been an explosion of choice in broadcasting with a myriad of commercial channels now available to audiences across Wales with rapidly increasing content provision, of all sorts, online too. It is a fact that none of these commercially funded channels make or show any programmes specifically for audiences across Wales - except ITV Wales. It is in this context that our PSB obligations for 90 minutes of programming outside of news each week - all made in Wales specifically for audiences across Wales - should be seen. It is a vitally important contribution to PSB in Wales.

Programme Strategy

When it comes to our PSB programming, we believe that our public purposes in Wales are best served by a strategy that secures the largest possible audience for the widest possible range of the high quality programmes that we make outside of news.

Within the budgets that we have we also look to maintain a broad range of different series and programmes each year to reflect the widest possible vista of life in Wales. In 2016, well known current affairs programmes such as *Wales this Week* and our political programme *Sharp End*, were complemented by a total of 24 different series and individual programmes that were produced by ITV Wales and by independent producers in Wales in 2016.

To illustrate the success of our strategy to maximise audiences for our PSB programming, in the week beginning February 27, our award winning current affairs programme *Wales This Week* returned to Welsh screens with a new series at 8pm on Monday night with an overnight audience of 171,000 viewers. By contrast, its BBC Wales rival, which was scheduled after the BBC Ten O'Clock News, attracted

83,000 viewers, whilst the S4C equivalent programme attracted 15,000 viewers. We will continue with this strategy in 2017.

Strengthening what we do

In the first year of our new licence term we secured the additional investment needed to launch our HD channel - ITV Wales HD - across DTT, satellite and cable platforms in Wales. This ensured the best possible viewing experience for ITV Wales viewers whilst maximising audiences for the PSB content that we produce.

2016 also saw significant new investments in the ITV network schedule which brought direct benefits to viewers in Wales.

Outside of our licence obligations, ITV's partnership with the BBC in 2016 secured universal coverage of Wales in the 6 Nations Rugby Championship on free-to-air television. As committee members will know, national sport is intrinsically linked with our culture and how we see ourselves as a nation. The share of viewing for ITV's coverage of Wales v Italy on February 5 for example, was 40 percentage points ahead of the network average for the same slot.

Even when Wales aren't playing in a 6 Nations game, it is not uncommon for the audience share in Wales to be significantly ahead of the ITV network average. International football matches attract a similar loyalty from television viewers in Wales. Indeed, ITV's coverage of Wales in the semi final of UEFA Euro 2016 finals set a new peak audience record for a live television programme shown in Wales (outside of the London 2012 Olympics) at more than 1.3m viewers.

Overall, ITV Wales had a strong year on air. Our all-time share of viewing for ITV Wales grew by 2.4% year-on-year - or by 0.6% percentage points - to 17.2%. In 2016, ITV Wales peak time SOV stood at 22.5%, less than one percentage point behind BBC Wales and nearly 3 percentage points ahead of STV.

Exceeding our minimum obligations

The obligations set by Ofcom are, of course, minimum obligations. Nevertheless, in 2016 ITV Wales exceeded both the minimum number of news and 'non news' minutes that we were expected to produce. This included our live seven-hour overnight results programme of the National Assembly Elections. This important, high cost programme was made over and above our minimum licence commitment in 2016.

In its report, the committee drew attention to a statement made by the Institute of Welsh Affairs in its 2015 Welsh media audit that the reduction in our 'non news' provision in Wales was 'in sharp contrast to the independently owned ITV service (sic) in Scotland which has actually increased its output'.

Of course, two of the three C3 licences covering Scotland are operated by STV plc, a separate company from ITV plc. I should also point out that following publication of that statement, the IWA clarified it to make clear the output figure it was referring

to for non-news in Scotland not only included the C3 licences held by STV, but also the two Local TV licences it held covering Central Scotland. As committee members may be aware, these Local TV licences cover the greater Glasgow and Edinburgh areas and - in themselves - roughly cover the equivalent population of Wales, thus providing economies of scale that cannot be replicated in Wales.

Indeed, each of the constituent nations of the UK are different from each other - economically, politically, culturally, linguistically - and it is perhaps not surprising that different solutions for delivering PSB programming have evolved in each. It is our understanding that in Scotland much of the 'non-news' obligation is achieved through a late night, current affairs magazine programme running across the majority of weeknights. We believe our strategy to offer audiences a greater variety of programmes, with the majority being shown in peak time before 10pm, is working for viewers in Wales within the context of our particular licence obligations.

The value of the PSB Status

Some committee members are clearly frustrated that ITV Wales does not make more programming specifically for audiences in Wales. Whilst, the reasons for this situation have been well documented and are well known, for completeness it is perhaps useful to restate them here.

Of course, ITV Wales is a PSB but it is important to recognise that the value of access to the spectrum and appropriate prominence on EPGs in Wales - and so with it the value of our stand alone Wales licence - is worth far less now than it was in 2003 when the Communications Act was passed. Ultimately, political decisions have been taken in the UK to favour competition and choice in broadcasting which has made it harder to continue to deliver the public benefits which used to be afforded by actual or quasi monopolies of advertising revenue under the analogue system. We now face colossal and increasing competition for viewers and revenue in TV and online and the benefits we receive from PSB status are now very limited - a fraction of the benefit in the days of analogue TV.

This is the reason why we are unable to match the PSB provision we offered 9 years ago. Today in Wales, there are some 60 television channels available on Freeview alone and hundreds more on satellite television which, in itself, is the platform of choice for 53% of households in Wales. Indeed, 73% of viewers in Wales can receive our free-to-air ITV channels - ITV2, 3 and 4 - which carry no PSB obligations.

Against this fragmentation of the audience to competition, the benefits to the main ITV channel of being a PSB in Wales - broadcasting spectrum and the backstop guarantee of appropriate prominence on linear Electronic Programme Guides (EPGs) in Wales - brings with it the significant costs of the PSB obligations that are in the Wales licence. In this context, it is perhaps worth mentioning that ITV already spends more than two-and-a-half times more per head on content specifically for

Wales (both news and 'non news' programmes) than we do for equivalent programming in the English regions.

As Ofcom effectively concluded at the end of the last PSB review and in the context of the renewal of the Channel 3 licences three years ago, there is no surplus value in the PSB licences which could be used to justify additional PSB obligations on the Channel 3 licence holders. In other words, in return for the limited PSB benefits we receive now, we are already providing the maximum affordable PSB contribution, most particularly in the form of nations and regions news.

In its 2013 regulatory statement Ofcom set out its conclusions as to the appropriate level of our programming obligations for the new licensing period (and which resulted in a stand alone Channel 3 licence for Wales for the first time):

"Ofcom acknowledges that PSB obligations have been reduced in recent years, as a result of the declining value of PSB status. We explained in our consultation that we believe the current level of obligations will remain sustainable over the course of the next licence period. Having examined financial data made available by licensees and carried out our own analysis, we said in our report to the Secretary of State that, in respect of PSB obligations generally, we considered that their contribution to the fulfilment of public service purposes remains a sufficient contribution when set against regulatory interventions (in particular regulatory assets) which they receive."

"While we understand the desire of some respondents to see an increase in PSB obligations, none produced evidence that would enable Ofcom to conclude that a significant increase would be sustainable."

"Although a number of respondents advocated the enhancement of PSB obligations, Ofcom does not consider that the arguments or evidence that were advanced in response to the consultation undermine the reasoning set out in our consultation nor provide sufficient grounds to reach a different view."

Of course, ITV's overall commercial success is not limited to its PSB fortunes in Wales. ITV is now a global business: a successful integrated producer-broadcaster, operating the largest commercial family of channels in the UK. In addition to commercial broadcasting on our channels, we deliver our content on demand through numerous platforms, both directly and via the ITV Hub. Through ITV Studios we produce content for both our own channels and third parties in Wales, in the UK and increasingly overseas. Our distribution business sells finished programmes and formats worldwide. This scale of operation and the commercial success it brings would still be true if we did not have PSB status in Wales and instead made all our channels available commercially in Wales.

Ultimately, in Wales and elsewhere, ITV operates as a commercial business and we can only provide non commercial content pursuant to our obligations where we receive equivalent value in return.

If more obligations were imposed on us and those obligations had direct, or opportunity costs, to us we would have to consider where we would be able to make savings in other areas of our PSB output. Furthermore, arguably if any further obligations are to be imposed, they should be imposed on all players competing for TV advertising revenue in Wales, including YouTube and Facebook. Alternatively, they should be imposed only on players who are publicly funded or publicly owned.

Investing in production

Whilst we remain focussed on the high quality delivery of our licence obligations in Wales, we also have a track record for investment where we believe there will be a commercial return. Our multi-million pound broadcast HQ in Cardiff Bay, opened in 2014, is a part of that strategy; so too the launch of our HD channel and the recent strengthening of the ITV network schedule with Welsh national sport.

Producing programming for other broadcasters is a key part of the ITV strategy to diversify our sources of revenue beyond advertising. In Wales, as we are elsewhere, we are seeking to increase our volumes of production both organically and through acquisition.

Independent television in Wales has a proud tradition of producing programming in the Welsh language that pre-dates the creation of S4C. At ITV Wales we have competed openly with other producers in Wales to secure the commissions we have with S4C. Currently, our core output - *Y Byd Ar Bedwar*, *Hacio and Cefn Gwlad* - amounts to 2% of S4C's original hours largely in the important genre of current affairs, so providing plurality in the Welsh language. We have ambitions to do more and in 2016 we grew our sales through a new returning series *Y Detectif* and one-off commissions in factual and entertainment.

Network commissions and portrayal

A recommendation from the committee is for ITV Studios to adopt a more proactive approach to developing programmes featuring Wales for broadcast on the ITV network.

The committee's report acknowledged the recent steps ITV Wales has taken to secure commissions from the ITV Network and from other UK broadcasters. Shiver Cymru, a partnership between ITV Wales and ITV Studios, is at the heart of this new approach. Launched at the end of 2015, the label had its first network success with the single hour-long documentary *The Aberfan Young Wives Club* which marked the 50th anniversary of the disaster. The film was shown on ITV across the UK and has now been nominated in the History category of the 2017 Royal Television Society Programme Awards and in the Single Documentary category in the Celtic Media Festival.

Although programming on ITV needs to be both commercially and creatively successful there is no barrier to entry from any part of the UK. Ultimately, we believe the most successful schedule for the UK will come from operating a meritocracy of ideas sourced from right across the UK rather than quotas.

By its very nature, the ITV network schedule features Wales. ITV's coverage of the 6 Nations and Welsh football have already been discussed here. Auditions for the big entertainment shows - *Britain's Got Talent* and *X Factor* - are held each year in Wales. Many factual series, most recently *Robson Green's Tales from the Coast* in January, have featured Welsh locations and contributors. In drama, the second series of *Safe House*, by Welsh director Marc Evans, was filmed on location in Anglesey.

At ITV Wales we are keen for the vibrant independent production sector in Wales to contribute to the success of ITV network schedule and in so doing serve to further increase the portrayal of Wales on the network. Boom Cymru is not only a highly successful producer across numerous genres for S4C, it also produces many hours of programming for UK broadcasters, including ITV. It is hoped that now being an ITV Studios company, this will further strengthen its relationship with ITV network commissioners, providing more potential for the future.

Of course, ITV is open for business to all independent producers across Wales. We realise that we are competing for attention with the publicly funded broadcasters in Wales and each year production companies in Wales - along with companies from across the UK - are invited to meet with ITV's commissioners in London. We also facilitate 'meet the commissioner' events in Wales to increase the flow of ideas. As a result, there are currently a number of ongoing, productive conversations taking place between independent producers in Wales and ITV commissioners that might not have been the case a few years ago.

Accountability

The committee's second recommendation pertaining to ITV is to provide an annual update to the Assembly, through the committee, setting out information on the portrayal of Wales on our networks.

Whilst broadcasting is not devolved, we are pleased to assist the work of the committee. Over the years we have maintained a constructive relationship with the Assembly and Government in Wales.

As a lean, commercially funded broadcaster - one that is predominantly focussed on making programmes for its audience in Wales - it would be an impractical use of our available resources to provide a detailed annual log of all the portrayal of Wales on the main ITV channel. We would propose instead an annual, narrative update on portrayal on ITV as part of a wider update as to how ITV Wales is performing against its licence obligations.

I am grateful for your interest in ITV Wales and I hope committee members will find the additional information in this letter useful as they continue their important work.

Kind regards,

A handwritten signature in black ink, appearing to read 'Phil Henfrey', with a stylized flourish at the end.

Phil Henfrey
Head of News and Programmes, ITV Cymru Wales

Rhodri Williams
Director, Ofcom Wales

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22 Mawrth 2017

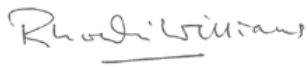
Annwyl Bethan

Y Darlun Mawr – Safbwyntiau Cychwynnol y Pwyllgor ar Ddarlledu yng Nghymru

Diolch am eich llythyr dyddiedig 16 Chwefror yn gofyn am ymateb Ofcom i'r argymhellion ynghylch Ofcom sydd yn yr adroddiad. Rwy'n amgáu ein hateb i'r ddau argymhelliad ynghyd ag ymateb i'r farn a fynegwyd gan y Pwyllgor ynghylch trwydded ITV Cymru.

Os bydd angen rhagor o wybodaeth arnoch, mae croeso i chi gysylltu â mi.

Llawer o ddiolch



Rhodri Williams

Director, Wales

Ymateb Ofcom i argymhellion y Pwyllgor Diwylliant y Gymraeg a Chyfathrebu

Parthed argymhelliad 8. “Rydym yn argymell bod Llywodraeth y DU ac Ofcom yn ystyried diwygio Cod Ymarfer Ofcom ar gyfer darparwyr Canllaw Rhaglenni Electronig i sicrhau bod S4C yn amlwg yng Nghymru yn y Canllawiau Rhaglenni Electronig a chymwysiadau teledu deallus, fel gwasanaeth iPlayer y BBC.”

Tarddiad ac amodau cod Canllaw Rhaglenni Electronig (EPG) cyfredol Ofcom ynghylch rhoi lle amlwg

Mae Deddf Cyfathrebiadau 2003 (“y Ddeddf”) yn gosod dyletswydd ar Ofcom i sicrhau bod sianeli gwasanaeth cyhoeddus yn cael lle digon amlwg ar Ganllawiau Rhaglenni Electronig. Yn fwy penodol, mae adran 310 o'r Ddeddf yn ei gwneud yn ofynnol i Ofcom fynd ati i lunio, ac o bryd i'w gilydd adolygu a diwygio, cod sy'n rhoi arweiniad ar yr arferion y dylid eu dilyn wrth ddarparu canllawiau rhaglenni electronig. Mae hyn yn cynnwys arferion ar gyfer rhoi'r fath le amlwg y mae Ofcom yn ei ystyried yn briodol wrth restru neu hyrwyddo, neu restru a hyrwyddo'r rhaglenni sydd ym mhob sianel gwasanaeth cyhoeddus ar gyfer aelodau'r gynulleidfa fwriedig.

Er mwyn gweithredu'r ddyletswydd hon, mae Ofcom wedi cyhoeddi Cod Ymarfer ar Ganllawiau Rhaglenni Electronig (“Cod EPG Ofcom”)¹. Mae'n gosod yr egwyddorion cyffredinol y mae'n rhaid i ddarparwyr EPG gydymffurfio â hwy (paragraff 3 Cod EPG Ofcom), ond sy'n gadael iddynt benderfynu sut maent yn cydymffurfio â'r egwyddorion cyffredinol hyn:

Mae Ofcom o'r farn fod ‘rhoi lle amlwg priodol’ yn caniatáu rhywfaint o wahaniaethu o blaid sianeli darlledu gwasanaeth cyhoeddus. Ond, nid yw'n bwriadu rhagnodi beth ddylai rhoi lle amlwg priodol ei olygu, gan fod sawl ffordd bosibl i'r Canllawiau Rhaglenni Electronig ddangos gwybodaeth am raglenni sydd yng ngwasanaethau darlledu gwasanaeth cyhoeddus. Yn unol â hynny, mae'n ofynnol bod darparwyr EPG yn cydymffurfio â'r egwyddorion cyffredinol canlynol:

- a. Dylai darparwyr EPG sicrhau bod y dull maent yn ei fabwysiadu er mwyn sicrhau lle amlwg priodol, wedi'i gyfiawnhau'n wrthrychol a dylent gyhoeddi datganiad yn disgrifio eu dull;
- b. Bydd Ofcom yn rhoi sylw i fuddiannau dinasyddion a disgwiliadau defnyddwyr wrth ystyried a yw dull penodol ar gyfer rhestru sianeli gwasanaeth cyhoeddus yn rhoi lle amlwg priodol; a
- c. wrth roi lle amlwg priodol i sianeli darlledu gwasanaeth cyhoeddus, dylai Canllawiau Rhaglenni Electronig alluogi gwylwyr mewn ardal i ddewis y fersiynau rhanbarthol mwyaf priodol o'r sianeli hynny drwy brif restrau'r sianeli hynny ar yr amod bod y gwasanaeth darlledu gwasanaeth cyhoeddus dan sylw wedi sicrhau gwasanaethau sy'n galluogi hyn.²

¹ https://www.ofcom.org.uk/data/assets/pdf_file/0031/19399/epgcode.pdf

² Paragraff 3 y cod

Yn ddiweddar, rydym wedi cadarnhau bod Ofcom yn ymwybodol o'r rôl bwysig y mae lle amlwg yn yr EPG wedi'i chwarae wrth gefnogi'r system sianeli darlledu gwasanaeth cyhoeddus: yn ein hadolygiad diwethaf o sianeli darlledu gwasanaeth cyhoeddus, daethom i'r casgliad y dylai'r egwyddorion craidd sy'n sail i gynnwys a darpariaeth gwasanaeth cyhoeddus barhau; y dylai cynnwys gwasanaeth cyhoeddus fod ar gael i bawb, ac yn hawdd cael gafael arno ar systemau y mae'r gwylwyr yn eu defnyddio, a'u bod yn amlwg er mwyn ei gwneud hi'n hawdd dewis. Nodwyd gennym hefyd fod angen rhoi ystyriaeth bellach i rai materion o ganlyniad i'n hadolygiad, gan gynnwys rhoi lle amlwg.³

Yn 2016 aeth y Llywodraeth ati i ystyried y posibilrwydd o ddiwygio'r system rheoleiddio lle amlwg ar y Canllawiau Rhaglenni Electronig, a daeth i'r casgliad bod y system yn dal i fod yn effeithiol gan ddiystyru unrhyw ddiwygio deddfwriaethol.⁴

Gwasanaethau a ddaw o dan gochl y gofyniad i roi lle amlwg

Mae'r rhestr o sianeli a ddaw o dan gochl y gofyniad i roi lle amlwg wedi'i nodi yn adran 310 y Ddeddf: h.y. fersiynau digidol gwasanaethau BBC, yn ogystal â gwasanaethau digidol Channel 3, 4 a 5, Teletext a S4C. Mae'r Ddeddf yn nodi hefyd y gall yr Ysgrifennydd Gwladol ychwanegu at y rhestr o sianeli darlledu gwasanaeth cyhoeddus neu dynnu oddi arni. Ychwanegodd yr Ysgrifennydd Gwladol wasanaethau teledu lleol at y rhestr yn 2012 drwy gyfrwng gorchymyn⁵.

Nid oes dim newidiadau eraill wedi'u gwneud i'r rhestr o sianeli nac i'r darpariaethau deddfwriaethol yng nghyswllt rhoi lle amlwg ers i'r Ddeddf ddod i rym.

Nid yw cymwysiadau teledu deallus fel iPlayer y BBC neu unrhyw wasanaeth fideo ar-alwad wedi cael eu rhestru o dan adran 310. O ganlyniad, nid ydynt yn gorfod dilyn Cod EPG Ofcom, ac nid oes yn rhaid i Ofcom chwarae unrhyw rôl i sicrhau bod y gwasanaethau hyn, na darparwyr cynnwys penodol o fewn y gwasanaethau hyn, yn cael lle amlwg.

Lle amlwg i S4C ar Ganllawiau Rhaglenni Electronig

Fel y nodwyd uchod, mae'n ofynnol bod darparwyr EPG yn cydymffurfio â Chod EPG Ofcom wrth ddyrannu safleoedd EPG ac, yn benodol yn y cyd-destun hwn, yn cydymffurfio ag adran y Cod sy'n berthnasol i roi lle amlwg i sianeli gwasanaeth cyhoeddus. Nid yw'r Cod yn rhagnodi beth yw ystyr rhoi lle amlwg priodol yng nghyd-destun unrhyw wasanaeth penodol, ond mae'n nodi egwyddorion cyffredinol.

³ https://www.ofcom.org.uk/_data/assets/pdf_file/0025/63475/PSB-statement.pdf

⁴ Mae hyn wedi'i nodi yn yr adroddiad ymgynghori "The balance of payments between television platforms and public service broadcasters. Ymateb y Llywodraeth 5 Gorffennaf 2016."

⁵ Gorchymyn Cod Ymarfer ar gyfer Canllawiau Rhaglenni Electronig (Ychwanegu Gwasanaeth Rhaglen) ('a.310 Gorchymyn').

Os oes unrhyw ddarlledwr yn pryderu am y safle a ddyrannwyd iddo gan ddarparwr EPG, mae'n werth nodi y gall gysylltu â'r darparwr EPG hwnnw yn uniongyrchol i geisio datrys y mater. Nid oes gan Ofcom rôl reoleiddiol mewn trafodaethau o'r fath. Gall darlledwyr gyflwyno cwyn i Ofcom hefyd os ydynt o'r farn bod darparwr EPG trwyddedig wedi torri amodau gofynion ein Cod EPG. Nid ydym wedi cael sylwadau penodol gan S4C i'r perwyl hwn hyd yma.

Yn olaf, rydym yn cydnabod ei bod yn ofynnol, o dan adran 310 Deddf Cyfathrebiadau 2003, i ni adolygu'r darpariaethau o ran rhoi lle amlwg o bryd i'w gilydd. Ond, dim ond hyn a hyn o adnoddau sydd gan Ofcom, ac mae'n ailasesu'n rheolaidd beth yw'r ffordd orau o ddefnyddio'r adnoddau hynny. Yn sgil blaenoriaethau polisi sy'n cystadlu â hyn, a chan nad oes diwygio deddfwriaethol, nid oes fwrriad gennym ar hyn o bryd i adolygu'r Cod EPG yng nghyd-destun darpariaethau i roi lle amlwg. Rydym yn ymwybodol bod y Cod presennol yn cyfyngu rhywfaint ac felly mae'n bosib y byddwn yn ailedrych ar y sefyllfa hon yn y dyfodol.

Parthed argymhelliad 11. *Rydym yn galw ar Ofcom i asesu pa bwerau sydd ganddo i gynyddu cwotâu Channel 4 y tu allan i Loegr cyn adnewyddu'r drwydded nesaf yn 2024 a thrwy wneud hynny, ailystyried yr opsiynau mwy heriol a awgrymwyd ar gyfer cynyddu'r cwota yn 2013-14.*

Yn unol â'r Ddeddf Cyfathrebiadau, rhaid i Ofcom roi trwydded ar gyfer darlledu Channel 4 ac mae'n gorfod gosod ystod o rwymedigaethau yn nhrwydded Channel 4, gan gynnwys:

- Cwotâu ar gyfer cyfran isaf o gynyrchiadau gwreiddiol cymwys i gael eu comisiynu gan gynhyrchwyr annibynnol ac o'r tu allan i Lundain;
- Cwotâu ar gyfer cyfran isaf benodol o raglenni gwreiddiol ar gyfer y sianel; a
- Gofynion i gynnwys swm priodol o newyddion y DU, materion cyfoes, a rhaglenni i ysgolion;
- Cylch gwaith gwasanaeth cyhoeddus penodol sy'n cael ei osod yn amod yn y drwydded.

Wrth osod amodau'r drwydded, rhaid i Ofcom ystyried a yw'r rhwymedigaethau a osodwyd ar Channel 4 yn cyfrannu at ddibenion cyffredinol darlledu gwasanaeth cyhoeddus. Rhaid i ni ystyried hefyd gyfraniad a chost gwahanol amodau'r drwydded a bod y drwydded, ar y cyfan, yn gynaliadwy.

Rhoddodd Ofcom ystyriaeth i hyn yn ei Ail Adolygiad o Ddarlledu Gwasanaeth Cyhoeddus⁶ ac o ganlyniad, newidiodd rai o amodau'r drwydded ar gyfer Channel 4. Roedd hyn yn

⁶ https://www.ofcom.org.uk/cymru/consultations-and-statements/category-1/psb2_phase2

cynnwys cynyddu'r cwota ar gyfer rhaglenni a gynhrychir y tu allan i Lundain i 35% o'r gwariant a'r oriau. Ar ben hynny, rydym wedi gosod cwota newydd hefyd ar gyfer cynhrychu y tu allan i Loegr (h.y. yng ngwledydd y DU: Cymru, Yr Alban a Gogledd Iwerddon) o 3%.

Fel rhan o broses adnewyddu'r drwydded ar gyfer Channel 4 yn 2014, aethom ati i gynyddu'r cwota ar gyfer y tu allan i Loegr i 9% o'r gwariant a'r oriau erbyn 2020. Ar ôl ystyried y dystiolaeth ac ymatebion y rhanddeiliad a gawsom yn y broses ymgynghori, roeddem o'r farn fod rhoi ffigur o 9% erbyn 2020 yn ofyniad cymesur y gellid ei gyflawni. Rhaid bod modd cyfeirio'r gofyniad at ganolfannau cynhrychu yng Nghymru, Yr Alban a Gogledd Iwerddon. Rydym wedi nodi'r rhesymau dros hyn yn natganiad adnewyddu'r drwydded.⁷

Gan nad yw lefel y cwota newydd wedi dod i rym eto, ni allwn adolygu pa mor effeithiol yw. Er nad ydym yn bwriadu ailystyried lefel y cwota hwn ar hyn o bryd, byddwn yn dal i fonitro cynnydd Channel 4 yn y maes hwn fel rhan o'n hymateb blynyddol i'r Datganiad o Bolisi Cynnwys Cyfryngau. O hyn, rydym yn nodi bod Channel 4 wedi gwneud cynnydd tuag at gyflawni'r gofyniad 9% yn ystod y blynyddoedd diwethaf:

	2011	2012	2013	2014	2015
Y tu allan i Loegr: Cyfran y gwariant	4.2%	5.4%	5.9%	6%	7%
Y tu allan i Loegr: Cyfran yr oriau	5%	7%	6.6%	6.1%	9%

Rydym yn nodi hefyd fod Ch4 yn ymwneud mwy ag ystod o gynrychiolwyr gwledydd i feithrin perthynas bellach ac adrodd ar y cynnydd, gan gynnwys pob un o Bwyllgorau Cynghori Ofcom ar gyfer pob gwlad.

⁷ <https://www.ofcom.org.uk/consultations-and-statements/category-3/renewal-c4-licence-out-of-england-quota>

Parthed barn y Pwyllgor am drwydded Sianel 3 i Gymru: “Er ei fod beth amser i ffwrdd, wrth ystyried trwydded newydd Sianel 3 ar gyfer Cymru, credwn y dylid rhoi ystyriaeth i lacio rhai o’r gofynion a osodir ar ddeiliad y drwydded yn gyfnewid am fwy o allbwn sy’n benodol Gymreig. Fodd bynnag, o ystyried na chaiff y drwydded ei hadnewyddu tan 2024, credwn fod achos i Ofcom edrych ar y materion hyn cyn bod hanner ffordd drwy’r drwydded i weld a ellir llacio rhai o’r gofynion yn gyfnewid am fwy o allbwn sy’n benodol Gymreig.”

Gan fod trwydded ITV Cymru yn rhan o rwydwaith Sianel 3, mae nifer o rhwymedigaethau yn y drwydded sy’n berthnasol i raglenni rhwydwaith yn ogystal â rhaglenni sy’n benodol i faes y drwydded. Yn unol â’r ddeddfwriaeth, mae’n ofynnol i Ofcom osod gofynion sylfaenol ar gyfer pob un o’r rhwymedigaethau hyn i’w gweithredu drwy gydol cyfnod y drwydded. Nid oes gennym yr hawl i benderfynu a allwn gynnwys y rhwymedigaethau hyn yn y drwydded

Yn ein datganiad ar adnewyddu trwyddedau Sianel 3, roeddem o’r farn fod amcangyfrifon ITV o gostau a manteision y drwydded yn rhesymol ac yn debygol o barhau er mwyn sicrhau’r rhwymedigaethau ar gyfer cyfran helaeth o gyfnod y drwydded nesaf. Nid ydym wedi cael tystiolaeth sy’n gwrthddweud y farn hon.

Rydym yn sylweddoli bod y rhanddeiliaid yn awyddus i weld darpariaeth well o raglenni newyddion a rhaglenni nad ydynt yn rhaglenni newyddion, sy’n berthnasol i Gymru, ac rydym wedi nodi yn y datganiad nad yw’r rhwymedigaethau presennol yn atal trwyddedeion Sianel 3 rhag darparu rhagor o gynnwys sy’n benodol i unrhyw faes penodol yn y drwydded lle y bo hyn yn ymarferol.

Eitem 5.4

Music and Education – Evidence Gathering

Bethan Jenkins – Head of Music, Lewis School Pengam

My name is Beth Jenkins and I am the Head of Music at Lewis School Pengam. I have taught Music at this school since September 2000 and have a wealth of experience delivering this subject to a varied valleys community of all boys.

At Lewis School Pengam, we focus our Music Curriculum on Rock and Pop rather than the more traditional Classical genre. The engagement of all boys is always a challenge and this ‘hook’ of a Rock and Pop curriculum enables us to accomplish this. As a result we have a very successful department with a Best Practice mention in the current Estyn Creativity in the Arts document (May 2016) alongside continued success at GCSE and BTEC Music Technology (pre 16) with pass rates of 95% and 100% respectively.

As a Head of Department, I have led our school’s Lead Creative School Programme which has just been awarded Best Practice by the Arts Council of Wales. I am also an Arts Champion for the South East Wales Arts Network and have been actively involved in delivering CPD training to other Music teachers in the region. I have also been selected to represent the EAS as part of the non-Core Lead GCSE Programme for the changes to our current GCSE Specification and I am working in collaboration with GWE to develop these resources.

I am a passionate advocate of music education and feel very strongly that in Wales we are not giving fair opportunities to all our pupils. There is a well established framework of training for young people who wish gain further skills in Classical Music, for example the National Youth Ensembles, training at the RWCMD, competitions that focus purely on classical traditions (Rotary, Gregynog) however this field is very much under developed for the Rock and Pop sector. I find it difficult to believe that we are not encouraging this industry in our schools as it has been well documented that the Creative Industries are one of the fastest growing economies in the UK. Here in Wales we pride ourselves on our Culture and Heritage and surely we should be aiming to preserve this in its current form for future generations.

This argument was highlighted only recently after a former pupil, Alex Stacey, returned from a trip to LA after signing his publishing deal with APG (Warner Group). He was asked by Ryan Tedder (frontman of One Republic and co-writer for Beyoncé and Adele) “what academy did he train at, was it the Brit School?”. His success is quite phenomenal in comparison with the young people from the Brit School who have had constant contact with industry professionals on a day to day basis. However, it must be mentioned that Alex did have support, as a result of a school based initiative, headed by Grammy Award winning songwriter, Amy Wadge.

I believe that we need to discuss the following:

- Rock and Pop tuition (ages 11–18) to rival the delivery of the Brit School provision
- Development of all Wales programmes for rock and pop ensembles to engage more young people at a higher level
- Opportunities for pupils to partake in national ‘competitions’ that actively encourage all forms of Rock and Pop, for example, Songwriting, DJing, Beatboxing
- Promotion of apprenticeships in the Creative Industries within Wales to enable another option post 16/18
- More creative industry based work in schools to encourage and prove to pupils and their families that working in this sector is a viable profession

This is only a short précis of the Music Department at Lewis School Pengam but I hope that it is evident that we have a passion to engage more young people in the Creative Industries. These views are also fully supported by our Headteacher, Christopher Parry. I would welcome a conversation to expand on these points.

Eitem 5.5

Conwy Music Service's contribution to the National Assembly for Wales' Inquiry into Funding for and Access to Music Education

Children and young people's access to local authority music services

- Financial insecurity and budget cuts at county, school and family level have negatively impacted access to music tuition in Conwy schools. This impact is worsening and the service is close to the tipping point which will lead to closure. Increasing inequality of access to music education.
- Tuition must be cost neutral to the authority and schools are charged £42.00 per hour. All but one primary school charge parents and most pass on the 'real' cost. Anecdotally, a growing number of pupils quit because they 'can't afford it' and we don't know how many never start in the first place due to charges. Many schools demand an annual up-front payment which appears to be making the situation worse.
- Music centres and specialist ensembles do still exist supported by a small core budget and parents paying membership fees. Introducing fees 3 years ago slashed numbers, several groups are likely to cease for 17/18. Access is already reduced and will reduce further.
- The service's core budget, severely cut for 9 years, will disappear in 18/19. All county group activity will cease. Pupils will not be able to fulfil their potential, or reach regional ensembles. Only pupils/families who can afford private provision will be able to progress.

The current position with the national and regional ensembles

- Conwy's contribution to regional provision will be cut for 18/19
- Regional provision will inevitably be diminished.
- The pathways to excellence for more able and talented pupils will be severely restricted.

Progress made in implementing the recommendations of the Welsh Government's reviews into music services and the national arts ensembles

- No progress – no support from councillors or director to ensure service is maintained. County music activities not seen as education service's responsibility.

The impact of funding decisions on the delivery of local authority music services

- Urgent action / funding needed to preserve children and young people's entitlement to music education.
- Service keen to explore options for regional provision with CAGAC colleagues
- Desperate need for ensemble / county group funding to maintain pyramid
- Service poised to be excellent contributor to a whole range of WG policies, strategies & statements, ACW's Arts & Creative Learning Plan and Donaldson's Education Review – but will disappear partially in 18/19 or completely in 19/20 in the absence of significant urgent action.



NYMAZ: Connect:Resound

Research & Development Report

Heidi Johnson
Director, NYMAZ

Dr Andrew King
Senior lecturer in music and technology, University of Hull

Dr Jonathan Savage
Managing director, UCan Play

Emily Penn
Digital R&D project manager, NYMAZ



Nesta...

Digital R&D Fund for the Arts

The Digital R&D Fund for the Arts is a £7 million fund that supports collaboration between organisations with arts projects, technology providers, and researchers. The Digital R&D Fund is supported by Nesta, Arts and Humanities Research Council and public funding by the National Lottery through Arts Council England.

For more information about its projects and digital R&D stories from around the world, visit Native: Magazine of the Digital R&D Fund for the Arts at artsdigitalrnd.org.uk or connect with us on Twitter [@digitalrnd](https://twitter.com/digitalrnd) or using the hashtag [#artsdigital](https://twitter.com/artsdigital).

Contents	
Executive Summary	4
Background	16
The Project	23
Results	35
Insights	55
Future	65
Further Resources	68
Appendix 1 Equipment list	73
Appendix 2	74
Glossary & Abbreviations	79
Acknowledgements	81

Executive Summary

The National Plan for Music Education sets out the seemingly simple ambition that all children in England, whatever their background or location, should be able to access a high-quality music education. This includes learning a musical instrument, playing and performing in ensembles and being able to progress in their individual musical journeys.

The Plan recommended the formation of a series of Music Education Hubs, to provide access, opportunities and excellence in music education for all children and young people, and to bring together all formal and non-formal music education providers within a geographic area.

Of the population of England 17.6% live in areas defined as rural.¹ However, for children growing up in these areas, access to music, along with other social, creative and educational opportunities, is adversely affected in a number of ways. Poor public transport infrastructure, high cost and significant travelling distances can limit the musical opportunities, and broader life chances, open to children and young people.² In particular, instrumental tuition requires specialist input, and travel costs for music leaders needing to go to isolated areas can be prohibitive. The delivery of high-quality, yet cost-effective music education to all children as envisaged in the National Plan is therefore a significant challenge to many Music Education Hubs in rural areas.

A specific recommendation (No 33) made by Darren Henley in his 2011 *Review of Music Education in England* was that future research should ‘... examine how technology could enable better teaching of music (particularly in rural communities)’.³ The Connect: Resound project responded directly to this recommendation and to the consistent challenges faced by children in rural areas in accessing music education by trialling alternative approaches.

¹ Census for England 2011 data cited in Department for Environment, Food and Rural Affairs (2014): *Statistical Digest of Rural England*.

² NYMAZ (2015): *Gone in the Air: Young People, Music and Rural Isolation*.

³ Darren Henley (2011): *Music Education in England: A Review for the Department for Education and the Department for Culture, Media and Sport*, p. 30.

Youth music development charity NYMAZ, a key strategic partner in the North Yorkshire Music Hub, collaborated with music education technology specialists UCan Play, research partners the University of Hull, and North Yorkshire County Council Music Service (lead organisation of the North Yorkshire Music Hub), to develop an R&D project. The aim of Connect: Resound was to investigate how video streaming technologies might be used to deliver music education and enrichment activities to children living in rurally isolated areas.

The project presented an exciting opportunity for NYMAZ and the North Yorkshire Music Hub to respond collaboratively to a key strategic issue and to develop a model of good practice, with the potential to rollout to other Music Education Hubs and contexts.

The original research proposition was:

Can internet technologies increase the ability of Music Education Hubs operating in rural areas to deliver a comprehensive, high-quality, yet affordable music education offer to all children and young people?

Utilising multiple approaches to video streaming in North Yorkshire, the project trialled delivery of the following Music Education Hub core and extension roles:

- Instrumental tuition
- Experiencing live music performances
- Continuing professional development (CPD) for staff.

The research proposition was later honed to:

How can existing video-streaming technology be repurposed to deliver online instrumental lessons for learners in remote rural locations?

The project team identified a standard technical setup for all three strands of activity, comprising the Roland VR-3EX video and audio mixer and streamer, three cameras and external microphones. The equipment was used in addition to Skype, in order to maximise the quality of sound and image, and was sourced with best value as well as quality in mind.

We aimed to develop a high-quality remote learning experience for the young people taking part, while also being cost-effective and financially viable for the education sector.

Instrumental tuition

The team recruited seven primary schools to work with on the project, ranging from very tiny and remote rural schools, with as few as 20 students, to the largest, with 230, on the outskirts of a rural town.

Each school selected a sample of ten pupils in total, comprising four individual pupils and two small groups of three pupils each, from year groups 4, 5 and 6, with varying levels of musical ability. Each individual pupil received 14 20-minute lessons and each small group received 14 30-minute lessons.

The first tranche of lessons was delivered from November 2014 to January 2015, and the second from February to April 2015, totalling 196 hours of online instrumental tuition. Pupils learned a range of instruments, including trumpet, clarinet, violin and guitar. Peripatetic teachers working for the North Yorkshire County Council Music Service provided tuition.

The project used a different technical configuration for each participating school in the first cohort of four schools, in order to compare and assess the different setups. The research team also observed a 'control group' receiving face-to-face music lessons. For the second cohort of three schools, following a preliminary review of the research, the Skype-to-Skype approach was discarded.

Live music performances and events

Connect: Resound collaborated with Musicport, Grassington Festival, and Harrogate International Festivals, to develop three live music broadcasts during the project. These encompassed live performances of acoustic/folk and classical music, in addition to a live, behind-the-scenes look at life in a band, which provided an insight into rehearsal and recording processes.

Continuing professional development

The project included a trial live broadcast from NYMAZ's Early Years Music Network annual conference, enabling early years practitioners from North Yorkshire and beyond to access remotely the keynote speech by Professor Colwyn Trevarthen. Training on using the equipment and providing music tuition online was delivered to the Music Service and to school staff, equipping the North Yorkshire music education workforce with a skillset that will enable them to continue to deliver and build on the pilot, and to pass on their learning to others.

Results

The research focused on the instrumental tuition strand of project delivery. The key research questions were:

- What can we learn about using online technology to deliver instrumental lessons?
- How have the pupils responded?
- How cost-effective is the approach?

The results of the data analysis demonstrated three major areas of discovery:

- Technology
- Delivery
- Environment.

The challenges found concerning the use of the technology included:

Time lag

The main challenge for all teachers was the inherent time delay using Skype: teachers were unable to count a beat alongside a pupil or to accompany them while playing.

Punctuality

Early on in the project, some lessons started late because of minor technical issues. By the end of the project, confidence and competence appeared to have increased, with all of the final lessons starting on time.

Sound quality

On sound quality, 68.6% of pupils reported that it was 'good' or 'very good', while 74.6% reported that they could hear what the teacher was saying 'most of the time' or 'all the time'. Teachers provided a median score of 7/10 for sound quality. Specific sound-related challenges included:

- Noise spillage from adjacent areas in schools;
- Amplification of background noise in Skype
- Reflections of sound in larger rooms.

Video quality

In terms of video quality, 86.5% of pupils reported being able to see what the teacher wanted them to do 'most of the time' or 'all the time'. Teachers gave a median score of 4/10 for video quality. However, teachers reported that their view of pupils was sometimes limited. This was alleviated somewhat by the Roland VR-3EX, when employed at the school, as the device enabled multiple camera angles.

Quality of internet connection was variable: 51.2% of pupils described the internet connection as 'okay', with 22% ticking the 'bad' category, and 21.9% ticking 'good or 'very good'. Teachers gave a median score of 5/10 for connection quality. Although superfast broadband was available in most areas the project team targeted some schools experienced connectivity issues. This impacted on pupils' ability to hear or see what the teacher was trying to communicate.

Delivery

The research team discovered:

- Pupil distraction was not an issue during online delivery, with teachers reporting good concentration among participants
- Beginner technique demonstrated well via online delivery
- All pupils reported enjoying the instrumental lessons, with 70.1% saying they enjoyed them 'very much', 16.4% 'quite a lot', and 13.4% 'a bit'

- Parents' reports of their children's enjoyment were slightly lower but still very positive: 57.1% of parents/carers said their child enjoyed the lessons 'very much', 24.5% stated 'quite a lot', 14.3% suggested 'a bit' and 4.1% 'not much'
- Assembly of instruments presented a potential challenge but was circumvented by teachers establishing their own protocol
- Tuning instruments presented issues but again teachers developed strategies to deal with this
- Where internet connection was poor difficulties were encountered in teaching particular instrumental techniques such as violin bow hold
- Face-to-face delivery was seen as preferable to online remote delivery by children and parents, though 39.0% of children and 29.2% of parents wanted the lessons to continue over the internet
- The project enabled children to receive music tuition who would otherwise not have had this opportunity: 79.5% of parent respondents would not have otherwise sought out instrumental lessons for their child
- Teachers integrated the use of different camera angles into their teaching during the course of the study and by the end were using the different angles for a similar proportion of teaching time. This suggests they became more comfortable with the technology.

Environment

There were a number of environmental issues that arose, including:

- Need for a dedicated teaching room: rooms with multiple functions in small rural schools caused disruption to online tuition
- Room size: small rooms were unable to position the cameras far enough away to fully see the pupil, while larger rooms had reflections that reduced audio quality
- Noise spillage from break time or adjacent rooms affecting delivery.

Impact

Overall, the project received a positive response from teachers, pupils, and head teachers.

Teachers reported that pupils made good progress in their lessons:

‘Really good, actually...the individuals got further than they would in a normal lesson. I think it was because of the kids, I think they really liked doing it over the internet.’

Parents gave positive feedback about children’s progress with 24.5% stating it was ‘very good’, 46.9% indicating it was ‘good’, and 28.6% that progress was satisfactory. Most of the pupils (74.1%) and many parents/carers (68.2%) wanted them to continue to learn their instruments ‘quite a lot’ or ‘very much’.

Teachers felt there were significant benefits in not travelling long distances to teach, but some suggested that the nuances of face-to-face learning may be lost with an online approach.

The issue of rural schools’ access to instrumental music lessons prior to Connect: Resound was touched on a number of times:

‘Because we're so very small and rural and I think it's important to give every child that opportunity to have instrumental lessons and that's what's so very difficult in a small school.’

Conclusions

Although there were some technical issues during the project, many minor problems were eradicated during the trial period. The time lag for the audio stream presents an ongoing challenge but other applications are under development to minimise and eradicate this problem.

Teachers’ flexibility in adapting their methods to suit online instrumental teaching was particularly encouraging.⁴

⁴ Audio only apps addressing issues of latency include <https://ccrma.stanford.edu/groups/soundwire/software/jacktrip/> and <https://jammr.net/>. Research underway into audio and video latency can be found at: <http://www.waikato.ac.nz/fass/about/staff/musik>.

Four technology approaches were trialled during the project, and two approaches are recommended by the research team for schools and Music Hubs to adopt:

- 1 Skype (school) to Roland VR-3EX (Music Hub); or
- 2 Roland VR-3EX (school) to Roland VR-3EX (Music Hub).

Although the cost of purchasing the Roland VR-3EX technology and related equipment is relatively low it could still prove prohibitively expensive to schools with small budgets. A simpler two-camera setup, (as opposed to the three cameras used in the pilot – one overall view of the teacher, and the other enabling close-ups) would still be an effective way to deliver an instrumental lesson. The use of just Skype with one external webcam and microphone at the school end, with a Roland VR-3EX at the Music Hub end, offers a possible alternative to effective tuition for learners.

Where it is possible for schools to invest in the technology the flexibility of having multiple camera angles (especially for group lessons) is clearly beneficial in terms of increasing the depth of experience.

Music Hubs could be delivering a greater number of online lessons from their geographical base and therefore investment in VR-3EX technology could prove a cost-effective option.

Information provided by North Yorkshire County Council Music Service indicated that:

- £77,000 is spent annually on mileage allowance for teachers
- In a typical teaching week, 980 hours were spent on face-to-face delivery of instrumental lessons
- A further 139 hours per week were spent on teachers travelling from school to school. This equates to 4.2 full-time members of staff.

There are potential savings both in terms of economic costs and time spent by teachers travelling between schools. Currently, lessons take place at a school only when a certain group size has been achieved, because of economies of scale. The approach used in this project means that even if a single child wants to study a particular instrument it

would be no less cost-effective than a face-to-face instrumental lesson in a school with multiple pupils. Therefore, access to music can be increased in these remote areas.

However, consideration must be given to the need for a fibre-optic broadband connection, and to the environment that the lessons are delivered from to ensure reasonable acoustics.

Both in terms of technology and pedagogy, the remote learning sessions were delivered successfully, with participants making progress comparable to face-to-face lessons. Feedback from stakeholders indicates this has been a welcome addition to music learning for the schools involved.

Were Music Hubs across the country to be set up with appropriate facilities in this way, they would have the potential to reach a greater number of pupils and widen access to music education for all, as envisaged in the National Plan for Music Education.

Insights

Selection of equipment

Bearing in mind budgetary considerations and the ambition to identify a cost-effective solution for future rollout, UCan Play, for example, chose a significantly cheaper camera which would normally be found in CCTV networks.

Use of equipment

The use of Skype caused a number of issues throughout the project. Despite the relatively low up-stream requirements of VR3-EX (less than 1Mbps), the large demands made on wireless networks within schools caused problems in broadcast transmission and reception.

Moving forwards and making recommendations for others

We reviewed and evaluated the tools used within the existing project's technical solution. The choices made were with consideration of the end user in mind: instrumental teachers have precious little time to set up technology in advance of teaching, they often have minimal technical skills in areas outside of basic music technologies, and the equipment itself needs to be robust and easy to manage.

Working with busy schools

Although commitment, timetabling, space and staff support all presented potential challenges to the research project, the teachers we worked with were unfailingly flexible, collaborative, enthusiastic and excited about participating in something they feel could make a real difference to the issues they face in providing music-education opportunities to young people.



Figure 1: North Yorkshire school students

Source: Sam Atkins

Future

Connect: Resound has demonstrated that online peripatetic music lessons can provide a quality and cost-effective way to increase children’s access to music. The head of the Music Service in North Yorkshire reflected the positive feedback from many of those involved, suggesting a blended approach incorporating both online and face-to-face tuition as a future model for delivery.

Access to adequate internet connections remains the key challenge for further dissemination of the Connect: Resound approach. The government's Superfast Broadband programme (part of the wider Broadband Delivery UK programme) aims to provide superfast broadband (speeds of 24Mbps or more) for at least 95% of UK premises by 2017, and universal access to basic broadband (speeds of at least 2Mbps) by 2016, with a total public investment to date of around £1.7bn.⁵

There has recently been significant press coverage about the frustrations of those living and working in rural areas about limited access to high-speed broadband compared with the ambitions and projected delivery dates of Superfast Broadband.

A new inquiry by the House of Commons Select Committee for the Department of Culture, Media and Sport (DCMS), 'Establishing world-class connectivity throughout the UK', has been launched to look at the coverage, delivery and performance of superfast broadband in the UK, and what needs to be done in order to connect the most remote areas – the final 5% of premises.⁶

There could also be wider implications for schools by increasing access to specialists in other areas through virtual means.

The screen-casting software used by the research team could provide an opportunity to expand the approach used by teachers when using online delivery. The ability to capture a live lesson so that both teacher and pupil had a video record could serve as a practice aid for pupils and a reflective tool for teachers.

We have become increasingly aware that many of the tools, technologies and approaches we intended to explore had applications beyond the initial scope of the project. By developing the confidence and capacity of arts leaders and schools to engage in learning online, including developing their familiarity with specific technologies, there are many possibilities for adaptation in other artform contexts – and beyond, into other subject areas.

⁵ <https://www.gov.uk/broadband-delivery-uk>

⁶ <http://www.ispreview.co.uk/index.php/2015/07/select-committee-starts-inquiry-into-uk-superfast-broadband-strategy.html>

Through delivering the live broadcast strand, we have also become aware of the growing interest in and capacity for live-streaming arts events among smaller arts producers and venues. There is potential to look at how connections between organisations and audiences can be facilitated, utilising the technology and specialist support that made these pilot broadcasts possible.

The project partners are currently looking at engaging more Music Hubs operating in rural areas so that the Connect: Resound approach can be rolled out further. A toolkit has been created to accompany this report and provide guidance to schools, Music Hubs and others wishing to implement the techniques piloted by Connect: Resound.

Background

Our vision is to enable children from all backgrounds and every part of England to have the opportunity to learn a musical instrument; to make music with others; to learn to sing; and to have the opportunity to progress to the next level of excellence.

The Importance of Music, a National Plan for Music Education, DCMS

‘The true beauty of music is that it connects people. It carries a message and we, the musicians, are the messengers.’

Roy Ayers

Learning a new musical instrument is an exciting journey of discovery, from learning how to assemble, hold and tune your instrument, to tentatively starting to play notes, melodies and scales, to participating in performances, ensembles and orchestras. For many children, their first – and often only – experience of this will have traditionally been via skilled and experienced instrumental teachers employed by the local authority music service.

In an area like North Yorkshire, covering over 3,000 square miles, with a very dispersed population, delivering a diverse music education to every school in the county presents particular practical, cost and transport challenges. North Yorkshire is classified as predominantly rural, with five of its seven districts classified as Rural-80 (districts with at least 80% of their population in rural settlements and larger market towns) and the remaining two classified as Significant Rural.

NYMAZ’s 2015 report into young people, music and rural isolation, ‘Gone in the Air’, notes the number of ways access to music education (along with other social, creative and educational opportunities) can be adversely affected for those growing up in rural areas:

‘The necessity of travelling considerable distances to access most amenities and activities, limited bus and train services (including schedules which stop running in the evening or at weekends) and the high cost of public transport combined with

lack of disposable income are all significant factors affecting the lives of children and young people in rural areas, presenting barriers to accessing services, education, training, employment and friends.’⁷

The National Foundation for Youth Music reports that rural isolation is the challenge reported most frequently by their grant holders, with 22.4% of participants in 2013/14 (an increase from 18.1% in 2012/13 and 16% in 2011/12):⁸

‘[Grant holders] demonstrated that local music-making opportunities were patchy or non-existent and that in-school provision was often very limited (and being further reduced) in the rural areas targeted.’

Music Education Hubs

Another important part of the context for the Connect: Resound project is the creation of Music Education Hubs,⁹ following the publication of the National Plan for Music Education in 2011. A total of 123 Hubs were created and started work in 2012, with the aim of providing access, opportunities and excellence in music education for all children and young people, and to bring together all formal and non-formal music education providers within a geographic area.

The North Yorkshire Music Hub aims to ensure that all children in the county have access to music education in and out of school, through organisations (led by North Yorkshire County Council Music Service) working in partnership to create joined-up, high-quality provision. This collaborative way of working enables gaps in music provision to be more easily identified, and responsive activities and solutions developed. One outcome of this collaborative process was the development of the Connect: Resound project.

Youth music development charity NYMAZ, a key strategic partner in the North Yorkshire Music Hub, linked up with music education technology specialists UCan Play, and with researchers from the University of Hull,

⁷ NYMAZ (2015): *Gone In The Air, Young People, Music and Rural Isolation*.

⁸ The National Foundation for Youth Music (2014): *Impact Report* <http://www.youthmusic.org.uk/our-impact/youth-music-impact-learning-reports-2014.html>

⁹ Abbreviated to Music Hubs for the rest of the document.

to develop an R&D project to investigate how digital technologies might be used to deliver music education and enrichment activities to children living in rurally isolated areas.

The Connect: Resound model proposed to respond to consistent challenges to accessing music education among children in rural areas by trialling alternative approaches. The project set out to discover in what ways video-streaming technology could increase the ability of organisations working in rural areas to deliver high-quality and varied music education for children and young people, and whether software could be developed to enable effective two-way flow of information between teachers and pupils.

The partners developed a model that would trial cost-effective video-streaming technologies and online communication tools to deliver instrumental tuition and music performances to pupils in primary schools in North Yorkshire, as well as access to online CPD for music leaders.¹⁰ The aim was to identify a new delivery model for music education, in which digital delivery complements live instrumental lessons, which could be shared and incorporated into Music Hub business plans and music development organisations nationwide.

We saw this as a crucial opportunity for the North Yorkshire Music Hub, as well as for other Music Hubs across the country, where delivery of high-quality, cost-effective music education to children, as envisaged in the National Plan for Music Education, is a significant challenge, especially in rural areas.

Living in a rural area means that transport times and costs can often limit the musical opportunities and broader life chances open to children and young people. Instrumental tuition, in particular, is expensive, requiring specialist input. This was again demonstrated in *Gone in the Air*:

‘Lack of specialist music leaders often means that choice is limited in rural areas – young people may be confined to learning certain instruments by the availability of teachers in the local area, or there may be no ensembles accessible to them which specialise in different musical genres – which in turn can hamper

¹⁰ Abbreviated to CPD in the remainder of the report

their further musical progression compared to their urban counterparts.’

Travelling times and costs are also real barriers to young people accessing instrumental tuition and live music performances:

‘A small survey of young people engaging in participatory music activities in North Yorkshire found that on average participants travelled 15.5 miles to attend music sessions [although distances can be much longer]...Participants are often reliant on parents, carers and other relatives to transport them to music activities, which can mean that those in challenging circumstances who aren’t supported by their families to engage with such activities can miss out.’

A specific recommendation made by Darren Henley in his 2011 Review of Music Education in England was that future research should ‘examine how technology could enable better teaching of music (particularly in rural communities)’.¹¹

Connect: Resound presented an exciting opportunity for NYMAZ and the North Yorkshire Music Hub to respond to a key strategic issue that the new model of collaborative working had identified, and to develop a model of good practice with the potential to rollout to other Hubs and contexts. The partners felt the project had real potential to drive innovation in the way that music education is delivered.

In most cases, Music Hubs are led by local authority music services, which may have had little historical impetus to innovate. As yet, many Music Hubs operate fairly traditional business models. Although there are pockets of excellent practice, many Hubs are still negotiating new governance models and ways of partnership working, and are dealing with severe local authority cuts and the need to raise additional income, leaving them little time to explore innovative delivery methods for core roles. In this context of policy changes, local authority restructures, reported increased difficulties in recruiting and retaining good quality staff, and budgetary constraints, it can be difficult for new approaches to be developed and then disseminated and embedded. Developing a

¹¹ Darren Henley (2011). Music Education in England: A Review for the Department for Education and the Department for Culture, Media and Sport, p. 30.

model that could be easily understood and adopted by other Hubs across the country was therefore an imperative for this project.

Connect: Resound provided an opportunity to explore, refine and test approaches to online music teaching, and ultimately to diversify, extend and enrich music education locally and nationally. With the addition of live broadcast performances and CPD opportunities we also aimed to explore the possibilities for broadening access to high-quality music performances and training events, especially to those whose rural locations restrict such access.

The project had a very specific focus, and testing the capacity of digital and online tools to deliver high-quality music education was our core priority. However, we were also aware that many of the tools, technologies and approaches we intended to explore had potential applications beyond the initial scope of the project. By developing the confidence and capacity of arts leaders and schools to engage in learning online, including developing their familiarity with specific technologies, the possibility for adaptations within other artform contexts has greatly increased.

The growth of live streaming

In terms of live broadcasts, there is a sense that the sector is on the cusp of a breakthrough as the technology and skills to produce high-quality performances for new audiences become more widely available and affordable. The same is true for CPD, as more arts professionals are able to access webinars and online training, and view and interact with live broadcasts of conferences. High-profile organisations such as TED have normalised this method of learning and within the cultural sector a number of trailblazers are setting the pace. For instance, the two day HI-ARTS' 2010 Culture and Social Enterprise conference was presented live online at <http://northings.com/webcast/>

In the music world, internet technologies are transforming the way musicians learn, collaborate and perform. The BBC's Arts Technologica series, hosted by Martha Lane Fox, recently highlighted some examples of how faster internet speeds are enabling innovative approaches:

- Eric Whitacre's Virtual Choir, featuring singers from countries as diverse as Syria and Cuba
- Former 10CC musician Kevin Godley's Whole World Band App, which allows anyone to make music with musicians anywhere on the planet
- Musicians at Edinburgh Napier University and the Royal College of Music in London using new technology on high-speed research networks, which allows them to play together with musicians in other countries in real time.

Many high-profile arts organisations are using new platforms to livestream performances and/or make available for download, from the New York Metropolitan Opera to the London Symphony Orchestra.

Moreover, the use of internet technologies for instrumental teaching is growing rapidly in the private sector. The National Piping Centre has a well-established Skype-based teaching programme, enabling learners all over the world to access tuition from specialist musicians in the learner's home country.¹²

As yet, there are far fewer examples of these technologies being used in instrumental tuition in state education of the under-18s, a notable exception coming from Dumfries and Galloway, where since 2004 the education service has been trialling teaching via video conferencing technology. Another exciting example is the Online Orchestra project, in which the Cornwall Music Education Hub is working with academic partners and the Philharmonia Orchestra to enable children and amateur musicians living in isolated rural communities in the South West to play in an online orchestra. As with Connect: Resound, these projects set out to explore the qualitative and technological factors that affect the delivery of collaborative, online music making and teaching in remote rural areas.

As access to faster internet connections improves, and the technology enabling lessons to offer more than a basic screen-to-screen interaction becomes more affordable, and as Music Hubs are being required to

¹² Project funded by the National R&D Fund for the Arts in Scotland
<http://www.nesta.org.uk/blog/digital-rd-arts-scotland-case-study-1-national-piping-centre>

become more innovative and flexible to changes in the way music education is supported, it is a good time to start exploring whether these kinds of solutions can be made more widely available.

The Project

The objective of the project was to identify a cost-efficient, high-quality method of enhancing the music education opportunities on offer; a business model that can then be shared with Music Hubs across the country.

In order to investigate this question, an R&D project was developed, which would work with primary schools across North Yorkshire to test different methodologies for delivering online tuition, the key differences being the equipment used at the school and teacher locations.

The overall research proposition was:

Can internet technologies increase the ability of Music Hubs operating in rural areas to deliver a comprehensive, high-quality, yet affordable music education offer to all children and young people?

In order to explore this proposition, we developed a set of research questions, which underpinned the project design and delivery:

- What can we learn about using online technology to deliver music lessons and enrichment opportunities, such as live performances?
- What technology exists to facilitate online music education and how cost-effective is it?
- How are other people using online technology to deliver music education and what research exists in this area?
- How reliable is the technology? How do the different configurations of technology being tested compare?
- How do pupils and teachers respond to using technology for teaching music and delivering music performances in this way?

Management

The project was delivered by a four-way partnership, led by NYMAZ on behalf of the North Yorkshire Music Hub. Technical direction and support

was provided by UCan Play, while the University of Hull led on the research elements of the project. North Yorkshire County Council Music Service (Music Hub lead) provided music tuition.

The partnership board comprised:

- Heidi Johnson, director, NYMAZ
- Ian Bangay, head of service, North Yorkshire County Council Music Service
- Dr Andrew King, senior lecturer in music and technology, University of Hull
- Dr Jonathan Savage, managing director, UCan Play

The delivery team included:

- Project management: Emily Penn, Millie Watkins (NYMAZ)
- Technical advice and training: Chris Bowes, Richard Llewellyn (UCan Play)
- Research and data analysis: Dr Robert Mackay, Dr Helen Prior, Dr Daniella Fountain (University of Hull)
- Marketing strategy: Elizabeth Parbutt, Jane Thomas (Made By Marketing)
- Instrumental tuition: Emma Calvert, Anne Heaton, Chris Hirst, Jonathan Hill, Andy Morgan, Daniel Timmins (all North Yorkshire County Council Music Service), and Alison Goffin (freelance)
- Live broadcast partners: Musicport, Grassington Festival, Harrogate International Festival (Producers); Maia, Hope & Social, Martin James Bartlett (Artists).

The project team was dispersed geographically and the full partnership met quarterly to oversee the project and review progress. Day-to-day delivery was enabled by using online and file project-management tools such as Basecamp and Dropbox, in addition to email, phone and Skype. Sub-teams met more regularly to deliver training, undertake site visits, plan and implement marketing campaigns, and keep the project to schedule.

NYMAZ and North Yorkshire County Council (NYCC) Music Service have a long history of collaborative working on music education activities, both preceding and following the advent of Music Education Hubs. NYCC Music Service is the lead organisation of the North Yorkshire Music Hub and NYMAZ is a strategic partner. UCan Play and University of Hull had had some contact prior to Connect: Resound due to similar research interests but this was the first time they had formally worked together. NYMAZ and NYCC Music Service had not worked with either UCan Play or University of Hull before the start of this project.

Project delivery

There were three key strands of activity:

- Instrumental tuition
- Access to live music performances
- Training and CPD.

The project team identified a standard technical setup that was to be used across all these strands of activity, based on the Roland VR-3EX video and audio mixer and streamer as the core component. To this we added three cameras and separate microphones. Pupils were also provided with headphones for use in the lessons. A full list of equipment is provided in Appendix 1.



Figure 2: VR-3EX,

Cameras and microphones, in use in an online instrumental lesson

Source: Sam Atkins

The equipment was to be used with live-streaming software Skype, in order to maximise the quality of sound and image, and was sourced with best value as well as quality in mind. We hoped to develop an approach focused on excellence of experience and learning for the young people undertaking distance learning of musical instruments, while also being cost-effective and within reach of the education sector.

Instrumental tuition

Connect: Resound recruited seven primary schools to work with on the project. North Yorkshire is a two-tier county, divided into seven districts, and we worked with a school from each district. The schools ranged in size and situation from very tiny and remote rural schools, with as few as 20 pupils, to the largest, with 232, on the outskirts of a rural town. Each school serves communities affected by rural isolation and that lack the services afforded to larger and more urban areas.

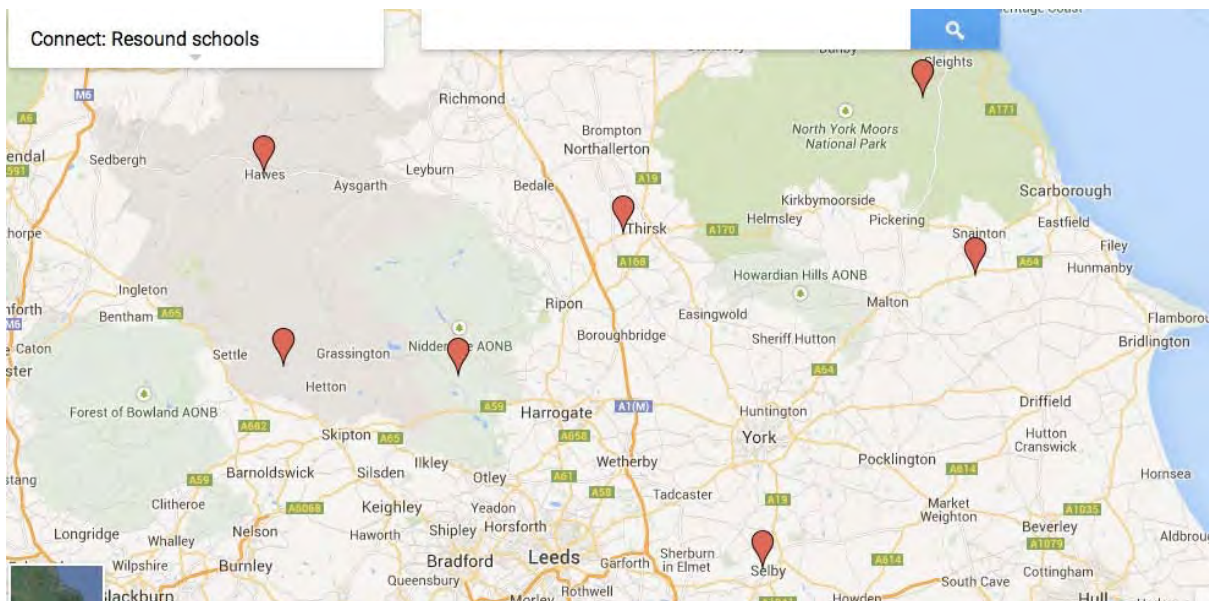


Figure 3: Locations of participating schools in North Yorkshire

Source: Google Maps

The schools were selected in consultation with the North Yorkshire County Council Music Service, and represented a range of experience and provision in terms of music education and instrumental tuition. We also worked with schools in areas where superfast broadband was available, with upload speeds of at least 1Mbps, to enable streaming of lessons. It is important to note that this minimum proved barely viable and, where better speeds were available, the experience was much improved. Not all rural schools have access to superfast broadband, so significant access issues to digital streaming remain.

Schools identified an appropriate space within their buildings with access to a computer and wired internet connection, and a member of staff (or in some cases a volunteer such as a parent governor) to set up equipment and sit in on lessons. Spaces varied depending on the size of school. For example, in the smallest schools we had a choice of just one of only two classrooms, whereas the larger schools offered the opportunity to test the technology in spaces such as school halls and libraries.

Each school selected a sample of ten pupils in total, comprising four individual pupils and two small groups of three pupils, from year groups 4, 5 and 6, with varying levels of musical ability. In one school, this cohort grew by one to include all the pupils in the relevant age group in the school. Pupils received two lessons per week, of 20 minutes duration for individuals and 30 minutes for small groups, over a period of seven weeks.

The first cohort of four schools received lessons from November 2014 to January 2015, and the second from February to April 2015 (each included a two-week break for school holidays), totalling 196 hours of online instrumental tuition. Pupils learned a range of instruments, including brass, woodwind, strings and guitar. A single group vocal lesson was also delivered to a full class of 30 pupils in order to assess the suitability of the techniques for larger groups.

Tuition was provided by skilled and experienced teachers working for the NYCC Music Service, enabling the Connect: Resound approach to be compared against decades of conventional face-to-face delivery. These peripatetic music teachers (including a number of senior staff and managers from the Music Service team) would normally travel the

county to deliver instrumental lessons to schools in person, but for this project would be based in a single location, delivering lessons to pupils via the internet using Skype.

We used a different technical configuration for each participating school in the first cohort in order to compare and assess the different setups. The research team also observed a ‘control group’ receiving face-to-face music lessons.

Table 1 below shows the technological setup used for each school. For School 1, for example, the teacher used a simple PC and webcam from their teaching base in Harrogate, linking up via Skype to the rural school, which was also using only a PC and webcam, to send sound and images of the pupils back to the teacher. Meanwhile, for School 4, the teacher used the VR-3EX audio-visual mixer, plus three additional cameras and microphones, and the school had the same setup. This enabled both teachers and pupils to switch between different camera angles, zoom in and out, and significantly increased the audio quality at



each end.

Figure 4: Still of programme in use

Source: Sam Atkins

School	Music Hub technology	School technology	Instrument
1	PC & webcam	PC & webcam	Violin
2	PC & webcam	Roland VR-3EX, 3 cameras, 3 mics	Clarinet
3	Roland VR-3EX, 3 cameras, 3 mics	PC & webcam	Guitar
4	Roland VR-3EX, 3 cameras, 3 mics	Roland VR-3EX, 3 cameras, 3 mics	Clarinet
5	PC & webcam	Roland VR-3EX, 3 cameras, 3 mics	Guitar
6	Roland VR-3EX, 3 cameras, 3 mics	PC & webcam	Woodwind (clarinet, flute, saxophone)
7	Roland VR-3EX, 3 cameras, 3 mics	Roland VR-3EX, 3 cameras, 3 mics	Trumpet

Table 1: Technical setup for each participating school

In week 1, the research team observed 13 individual lessons and 11 group lessons. The final lessons were also observed and captured.

The purpose of capturing of the first and last lesson was twofold:

- 1 To explore how the teachers used the technology and taught in the first lesson.
- 2 To understand how the use of technology and teaching approach had developed by the final lesson.

Post-project interviews took place with all the instrumental teachers, and feedback was sought from pupils, carers/parents, and school staff, including music coordinators and head teachers.

The instrumental teachers volunteered to take part in the project with a great deal of interest and enthusiasm. Training in using the equipment, and delivering instrumental tuition online, was provided by technology and music education specialists from UCan Play, who were also responsible for installing the technology in each location.

School recruitment, teacher training and delivery planning took place in a short period of time and there was very little scope for slippage in the timetable. One unforeseen issue during delivery with the first cohort was around permissions to use Skype.

This matter had been anticipated, with the Connect: Resound team working closely with the education authority's technical support team to ensure all necessary permissions were in place for schools. However, the Music Service itself connected to the internet via the county council's internet connection, which had different restrictions in place to the schools network. By working closely with the local authority, which was quick to find a solution, we resolved the situation, but the resulting delay affected the start and finish times of subsequent delivery, telescoping the available time for the research data to be collected, transcribed and analysed.

There is still variation across local authorities as to whether Skype is enabled for general use – some may have firewalls or IT protocols in place which specifically disable it – and it is a factor that Music Hubs would need to research when scoping a project of this kind, as many will be based in and teaching from local authority premises.

Access to live music performances

In addition to delivering instrumental tuition, Connect: Resound used the same technology setup developed for the schools programme to live-broadcast music performances and events online. Access to these broadcasts was offered to all schools in North Yorkshire.

Connect: Resound worked with Musicport, Grassington Festival, and Harrogate International Festivals, to develop a diverse programme of live music broadcasts. These encompassed live concert performances of acoustic/folk and classical music, in addition to a live, behind-the-scenes look at life in a band. This broadcast provided an insight into

rehearsal and recording processes and helped pupils to understand the link between learning an instrument at school and the range of professional, creative and social opportunities afforded by this experience in later life.

These performances were recorded and broadcast using the same technology setup developed for the schools-based instrumental tuition, with the addition of an extra camcorder to enable tracking and mobile shots. We broadcast using both wired internet connection and 4G signals, and made the performances available via YouTube.

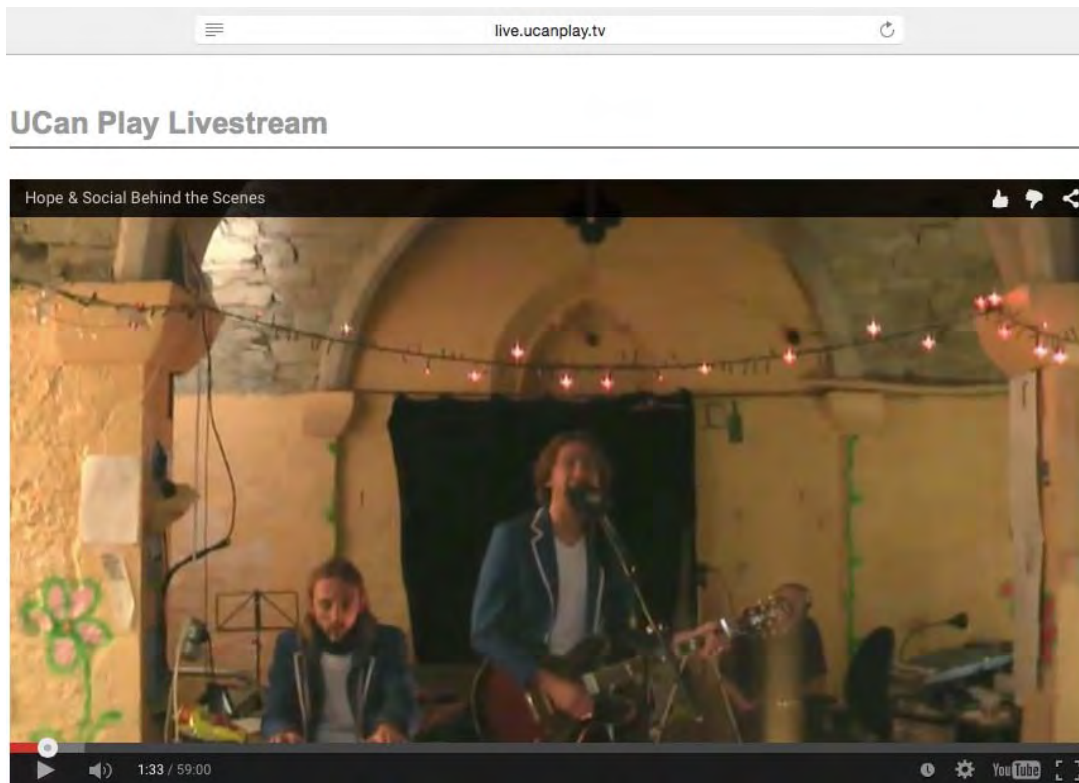


Figure 5: Live broadcast in partnership with Grassington Festival: Behind the scenes with Hope & Social
Source: Grassington Festival

As well as being valued by schools, there is increasing interest among smaller arts organisations in live streaming and/or recording their performances for online broadcast. There is potential to look at how connections between organisations and audiences can be facilitated, using the technology and specialist support that made these pilot broadcasts possible.

A total of 124 people watched the performances during the live broadcasts, while a further 827 have watched them subsequently. This may suggest that the market for online content in this case is larger than for the live event and bears further investigation.

Training and CPD

NYMAZ already produces regular webinars on aspects of music education and was keen to develop the scope of CPD opportunities offered through this project.

A live broadcast from our NYMAZ Early Years Music Network annual conference was trialled, enabling early years practitioners from North Yorkshire and far beyond to access the keynote speech by Professor Colwyn Trevarthen, a renowned expert on music, child psychology and psychobiology. There was a great deal of interest displayed on Facebook groups and other fora from the music and early years community in this event, but the broadband connection at the venue was lower speed than required, and much of the live broadcast was not available. However, 138 viewers have since accessed the archived presentation.

The Music Service and schools involved in the pilot were given training on how to use the equipment and to deliver music tuition online, thus equipping the North Yorkshire music education workforce with a skillset that will enable them to continue to deliver and build on the pilot, and to pass on their learning to others. This process culminated with a sharing event at the end of the project, in which everyone involved in delivery of any aspect of the project was invited to come along and share their learning and experiences, and collaboratively plan for where we can take learning next.

Marketing and communications

We needed to communicate with a variety of different people over the course of the project, from schools and parents to Music Hubs and arts organisations.

Our first priority was to generate a sense of community among all participants and partners. A visual identity was commissioned and used to lead the design and development of a mini-site hosted on the main NYMAZ website. The site carries everything from details of the schools involved to project insights and blog posts – www.nymaz.org.uk/connectresound.

It was also important to establish and maintain awareness of the project locally. Extensive media relations and social-media activity ensured that Connect: Resound was on the county’s radar, and we also achieved national coverage in the music education press.

As the project progressed, we commissioned high-quality photography and video to document and celebrate the project, and to help us to share the story with the media and people who want to learn about and from the project. Following completion of the research, the focus is on disseminating the results to stakeholders across the country, via media, academic journals, conferences/events in the music, arts, academic and education sectors, as well as directly via our social-media channels and website.

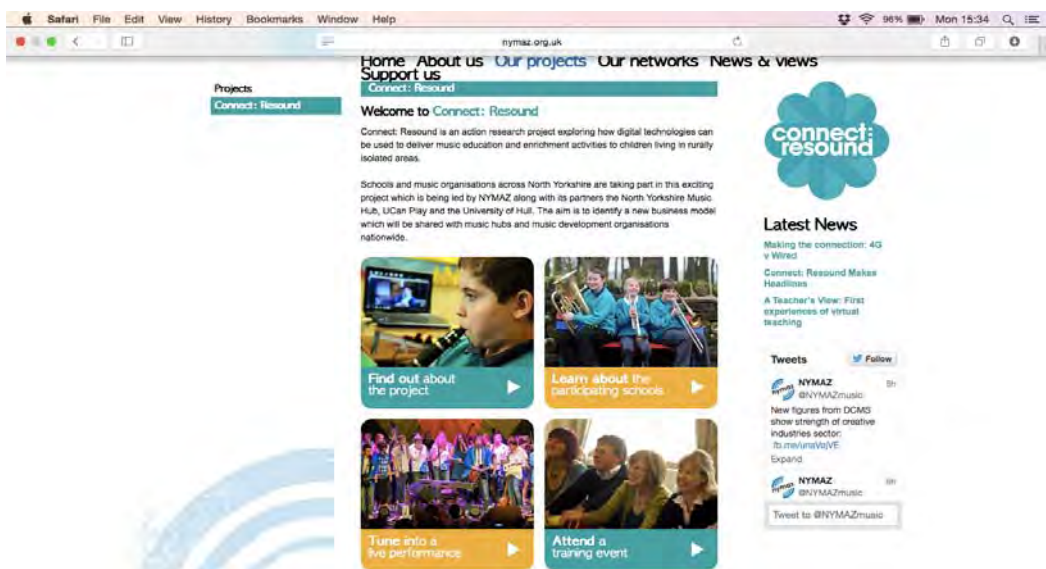


Figure 6: Connect: Resound webpages

Source:

www.nymaz.org.uk/connectresound

Costs

The total budget for the project was £112,705, broken down into:

- £15,221 – technical fees
- £9,341 – hardware
- £38,700 – research and evaluation
- £23,350 – project management and administration
- £7,700 – marketing, print, design and web
- £8,526 – music tuition
- £4,500 – live streamed music performances
- £5,367 – contingency.

The budget was delivered as anticipated. The main area where contingency funds were required was in technical support – we had underestimated the preparation time that would be required to deliver the three live broadcasts, with additional site visits and testing required for two of the three events.

Results

Connect Resound explored how online technology could be adapted to provide peripatetic music lessons to remote rural communities for those at the start of their musical journeys. The testing and modification of the approach used was integral to the project.

Research findings

The results of the data analysis demonstrate three major areas of discovery for the research team. These are based on the themes of:

- Technology
- Delivery
- Environment.

The areas are not equally weighted in terms of significance but capture the essence of what was discovered by the research team.

Technological findings of the research

The research was able to uncover a series of challenges concerning the use of the technology. These can be categorised as:

Time lag

It is not possible to reliably count a steady beat for pupils to play along to. In addition, accompanying students was an issue. However, in group lessons this was overcome by asking peers at the same location to provide a beat or an accompanying part.

The research and technology teams investigated a number of applications developed to overcome this latency issue, which is a very live topic in the area of online music collaboration in professional as well as educational contexts, with no entirely reliable or user-friendly solution available as yet that will enable one person to play easily in real time and in sync with another person online.¹³

In the case of the setup we used with Connect: Resound, delay was added to the sound (300ms) to keep the audio and video from the VR-

¹³ Audio-only apps addressing issues of latency include: <https://ccrma.stanford.edu/groups/soundwire/software/jacktrip/> and <https://jammr.net/>.

3EX in sync. But even without that delay and with a fast internet connection at either end, it wasn't possible for teacher and pupils to play together in time.

Technical problems

Some sessions in the first lesson capture started late because of minor technical issues. However, all of the final lessons started on time, suggesting that these problems had been overcome.

In addition to what was discovered through video observations, questionnaires were also given to all participants, with 70 pupils and 46 parents/carers completing feedback questionnaires.

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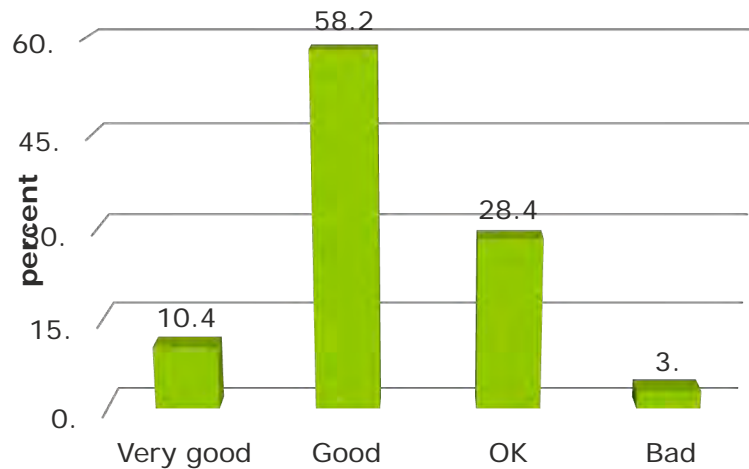


Table 2: How good was the sound quality?

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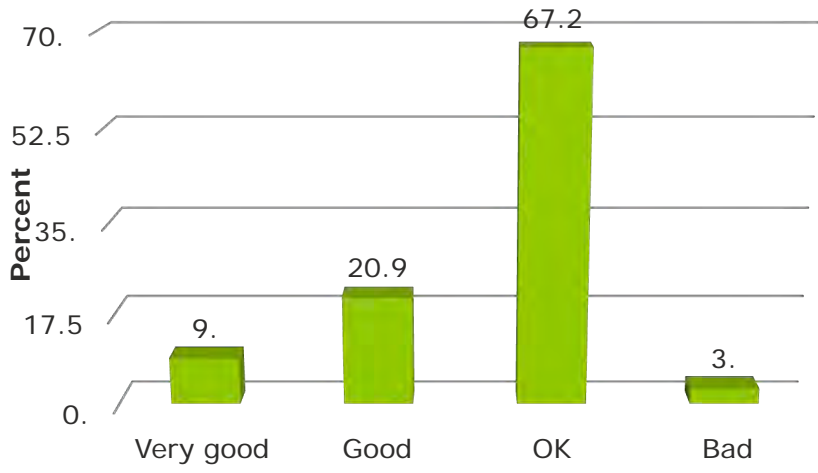


Table 3: How good was the video quality?

□



Table 4: How good was the internet connection?

The figures above refer to the sound, video, and quality of the internet connection based on responses from the pupil questionnaire.¹⁴

- 68.6% of pupils said that sound quality was ‘good’ or ‘very good’
- 29.9% of pupils said the video quality was ‘good’ or ‘very good’

¹⁴ See Appendix 2 for full data tables.

- 34.4% of pupils said that the internet connection was 'good' or 'very good'
- In post-project interviews, the five peripatetic teachers provided a median score of 7/10 for sound quality.

Specific sound-related challenges included noise spillage from adjacent areas in schools, amplification of background noise in Skype, and reflections of sound in larger rooms. Headphones were sometimes reported to be problematic for younger children – the connecting wires restricted their movement – particularly for those using bows with stringed instruments.

The quality of the video and the internet connection seemed to show a similar result in the questionnaire data. This is reflected in the teacher interviews where a median score of 4/10 for video quality and 5/10 for connection quality was noted.

Teachers' views of pupils were sometimes limited: they were not always able to see the whole of a pupil or a group of pupils, or to see the detail they required. This was alleviated somewhat by the Roland VR-3EX when it was employed at the school, due to the multiple camera angles and zoom options available enabling a more flexible and responsive approach. Similarly, teachers using the VR-3EX device were able to show pupils closer views of specific parts of their instrument. Although the different camera views were not always explored fully in the first lessons, by the end of the set of lessons, teachers and pupils seemed to have established specific positions for cameras and to have switched between the different views easily.

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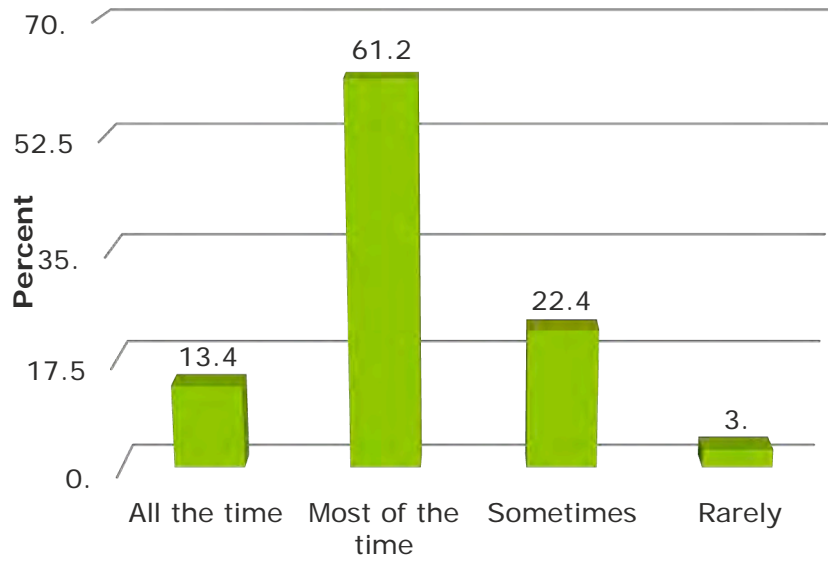


Table 5: Were you able to hear what the teacher was saying?

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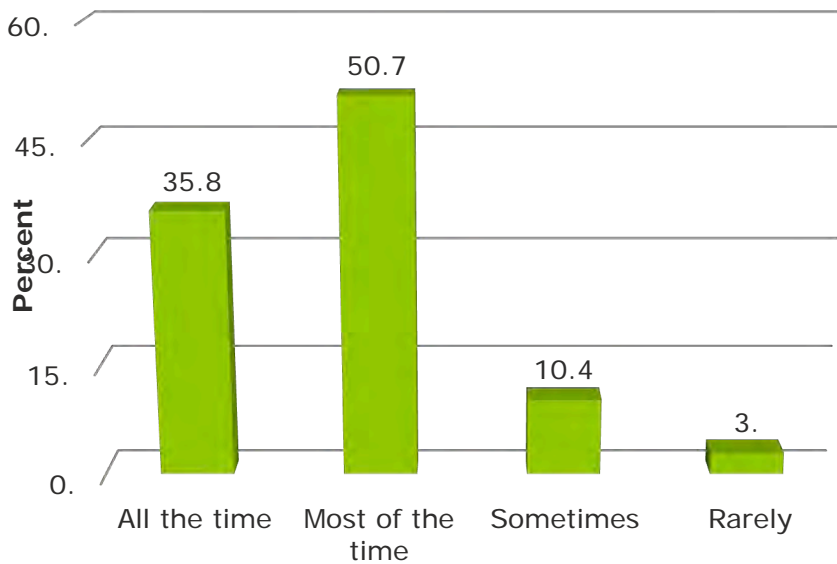


Table 6: Were you able to see what the teacher wanted you to do? (See previous page).

There were concerns over the video quality and connection: it would appear 74.6% of pupils could 'hear what the teacher was saying' and a further 86.5% 'were able to see what the teacher wanted [the student] to do'. It would seem that although superfast broadband was available in many of the areas the project team identified an issue with connectivity for schools. This can impact on the pupil hearing or seeing what the teacher is trying to communicate.

Delivery

In this section we will discuss the pedagogical implications of the project. First, this section highlights some of the main findings:

- Teachers often need to view the pupil as a whole
- Poor-quality internet connection affecting Skype caused difficulties in teaching instrument technique
- Assembling instruments was a potential issue
- Tuning instruments
- Technical problems with instruments
- Beginner technique demonstrated well via online delivery
- Pupil distraction was not an issue.

The ability to switch camera angles or at least view the pupil as a whole was demonstrated as important to a successful lesson. Problems assembling instruments only arose for the clarinet teacher and this was remedied by establishing a written protocol for assembling the instrument that was sent to the school prior to the lesson. The online delivery required ownership for tuning the instrument at the start of the lesson to rest with the learner, which can be a challenge for beginners. However, free apps have been found that help students tune their musical instruments. The only issue concerning difficulties teaching technique arose from the Skype-to-Skype method, which is one of the reasons this was dropped for the second cohort. Although the project was novel which may have impacted on pupils' ability to concentrate, all teachers agreed that pupil distraction was not a concern.

Earlier in the report it was outlined that different schools and teachers had access to different technology for the project. This involved the use of Skype and the Roland VR-3EX; the latter is a basic audio-visual mixer that can broadcast direct to the Internet. When a simple Skype setup was used at either end, only one camera angle was possible. However, the use of the Roland VR-3EX allowed up to three different camera angles to be used at either the teacher or pupil location, depending on the approach used. Figure 7 below demonstrates: an overall view of teacher or pupil (T), a mid-range view (U), and a close-up view (V).

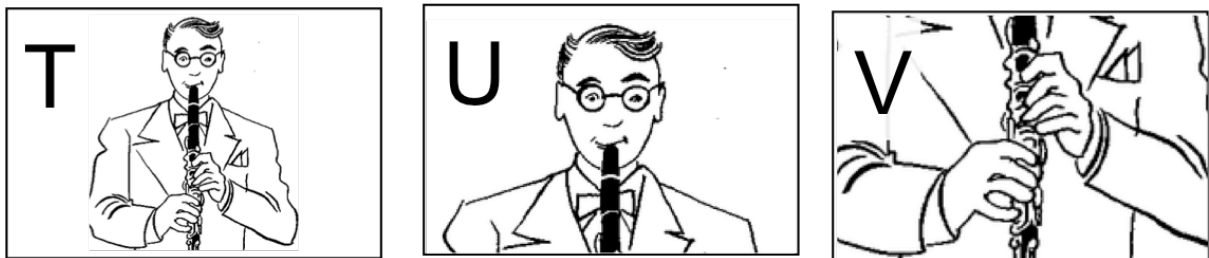


Figure 7: Three possible camera angles of teacher/pupil using an audio/visual mixer broadcasting to the Internet.

In addition to this approach, sometimes one camera angle was used to show the musical score (Figure 8a) or a side-view of a teacher or pupil (Figure 8b).



Figure 8a: Mid-range view changed for view of musical score



Figure 8b: Side-view of teacher or pupil

Teachers typically used the various camera angles in different ways. Our first teacher ‘Alison’ had access to the Roland VR-3EX that allowed: a full view of the teacher, a mid-range view, and a close-up view. In both the first and last lesson we sampled, Alison only used the overall view of the teacher and the close-up view. The amount of time spent using the close-up camera view was only 1% of the total first lesson time but this increased to 8% for the last lesson.

A second teacher ‘Andy’ also had access to the Roland VR-3EX to show the different camera angles. In contrast to Alison, this teacher spent 6% of the first lesson time using the close-up camera angle, 65% of the time on the mid-range camera, and 28% of the lesson time using the overall camera view. What is perhaps more interesting is by Andy’s final lesson his use had changed to 12% of the lesson time using the close-up camera, 3% of the time using the mid-range camera, and 85% using the overall view. Initially we thought this could be partly explained by the different instruments they taught – clarinet and guitar, respectively. However, the second lesson demonstrates that the teachers independent approach to using the cameras had come more into line with each other by the final lesson.

Our final analysis was a typical group lesson in which the VR3 is positioned at the students’ location, allowing flexibility in the use of camera angles. In the first lesson ‘Emma’ used a camera on each different pupil (a group lesson of three students) for 67% of the lesson and three different camera angles of the sample pupil for 33% of the time. In the final lesson two further uses of the camera were observed: a camera on each pupil in a group of two with side-view camera added, and a two-camera view of one pupil with another camera on the second. In this last lesson, Emma spent 22% of the lesson time using one

camera on each pupil, 19% with one camera on each pupil and a side view of each student, 45% with two cameras on one pupil and a third viewing another learner, and 14% with all the cameras dedicated to a single pupil.

What is interesting about both the individual and group lessons is how the teachers integrated the use of the camera angles into their teaching and how this evolved during the course of the study. For the group lessons it also shows how they adapt the use for smaller groups and suggests they have become comfortable with the technology at their disposal.

Teacher interview data

In initial interviews, teachers expressed concern about teaching children to assemble instruments, but this proved to be largely unproblematic when a standard protocol was demonstrated to pupils.

There were also some problems tuning instruments, which were overcome with adult help and, in some cases, with the use of a tuning app. Few problems were reported in teaching beginner technique, though teaching bow hold was reported to be very challenging. The main challenge for all teachers was the inherent time-delay using Skype, meaning teachers were unable to count a beat alongside a pupil playing. In group lessons, some teachers overcame this problem by asking children to count for one another. Providing a musical accompaniment for pupils was reported to be challenging.

Teachers reported that pupils concentrated well, and all the children reported enjoying the lessons:

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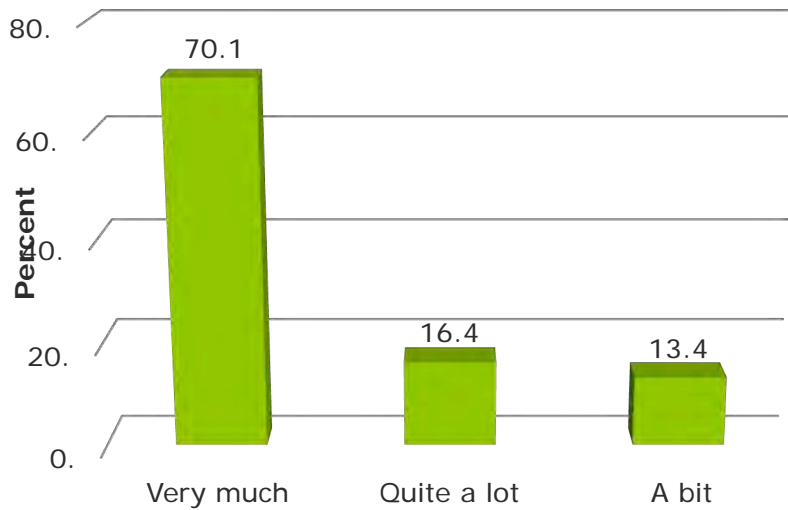


Table 9: How much did you enjoy the lessons?

We can see from Table 9 above that 70.1% of the children enjoyed the lesson ‘very much’, 16.4% ‘quite a lot’, and 13.4% only ‘a bit’. Parents’ reports of their children’s enjoyment were slightly lower (though the difference was not significant in a paired samples t-test), but still very positive: 57.1% of parents/carers said their child enjoyed the lessons ‘very much’, 24.5% stated ‘quite a lot’, 14.3% suggested ‘a bit’ and 4.1% ‘not much. The vast majority of pupils (92.5%) reported practising between lessons. Parents were slightly less positive about the amounts of practice when this figure dropped to 83.7%. It is worth noting that lessons took place twice a week, allowing less time for practice between lessons than in standard weekly music lessons.

Parents gave positive feedback about children’s progress, with 24.5% stating it was ‘very good’, 46.9% that it was ‘good’, and 28.6% that progress was ‘satisfactory’. Most of the children (74.1%) and many parents (68.2%) wanted them to continue to learn their instruments ‘quite a lot’ or ‘very much’. This is notable considering that 79.5% of parents/carers would not have tried to find instrumental lessons for their children had this opportunity not been available.

Face-to-face delivery was seen as preferable to online remote delivery by parents:

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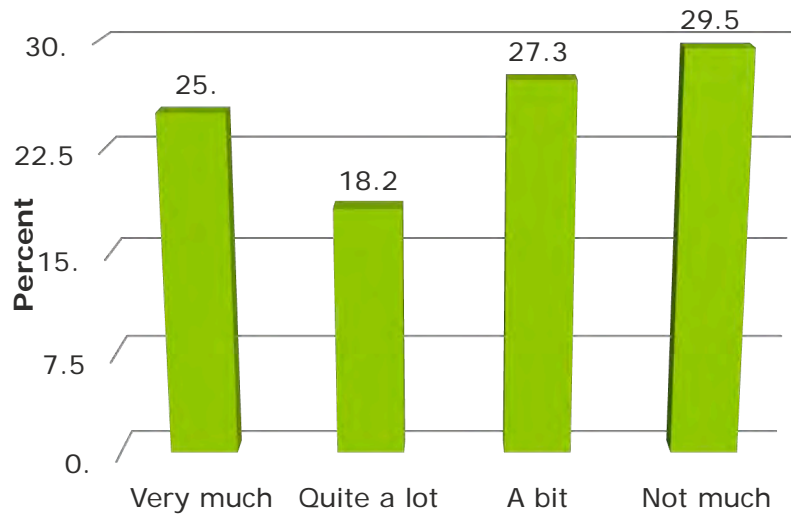


Table 10: How much would you like your child to continue with instrumental lessons?

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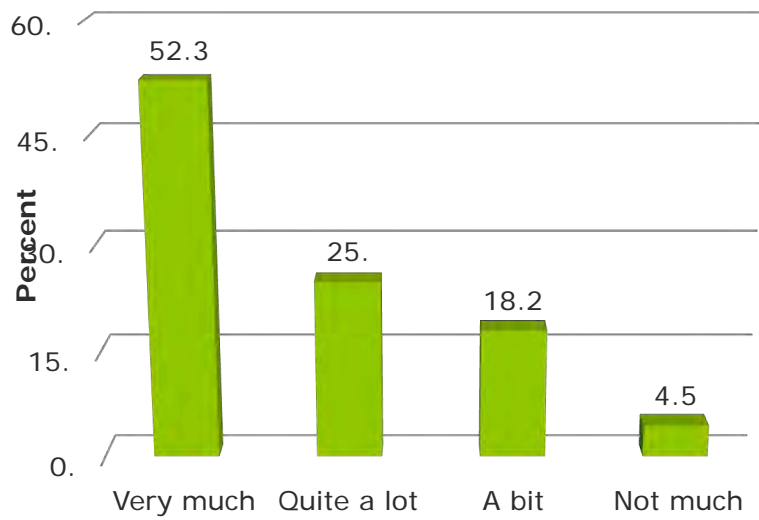


Table 11: How much would you like your child to continue with instrumental lessons in the same room as a teacher?

A similar pattern emerged with the responses from the pupils. It would appear face-to-face lessons are preferable to both students and parents/carers; however, as previously indicated, a considerable number were keen to carry on with lessons and a high percentage would not have sought lessons had it not been for this project.

Lesson behaviour

Although not relevant to the initial research questions, the research team decided to examine the lesson behaviour of the teachers involved in the project. This was achieved in two-ways: by capturing and analysing three 'face-to-face' lessons; and using an existing dataset from a recent article published in the journal, *Psychology of Music*.¹⁵

In the article the researchers have analysed the discourse of three adult piano teachers and the amount of time spent in their lesson within the following categories:

- Asking questions
- Demonstrating
- Giving advice/practice suggestions
- Giving feedback
- Giving information
- Listening/observing
- Modelling.

For the purposes of the Connect: Resound report we draw out from this research the main differences between online lessons and face-to-face lessons. In addition, since the teachers in this study are all piano tutors we also compare our own analysis using the Simones (et al.) dataset with the face-to-face lessons we captured, because our teachers taught clarinet, guitar, and violin.

From our analysis (see Table 1) of the online lessons, more time per teacher (mean) was spent 'asking questions' of pupils than in Simones' study but not within our own face-to-face analysis, which used the same analytical approach. Although within the 'giving advice/practice' category there appears some difference between online (43.56%) and face-to-

¹⁵ Simones et al. (2015). 'Categorizations of physical gesture in piano teaching: A preliminary enquiry'. *Psychology of Music*, 43(1): 103–21.

face piano lessons (35.9%), this is not significant especially when considered alongside the face-to-face lessons the team analysed (53.82%). What was perhaps more interesting is that a greater percentage of time was spent ‘modelling’¹⁶ between the piano lessons (40.2%) and our online lessons (12.5%) but, again, this was not demonstrated in the face-to-face lessons the research team captured (8.02%).

Behaviour category	Lesson type	Percentage % (mean)
Asking questions	Face-to-face (piano)	6.1
	Face-to-face (mixed instr.)	15.25
	Online	15.51
Demonstrating	Face-to-face (piano)	13.8
	Face-to-face (mixed instr.)	19.22
	Online	10.31
Giving advice/practice suggestions/feedback/information	Face-to-face (piano)	35.9
	Face-to-face (mixed instr.)	53.82
	Online	43.56
Listening/observing	Face-to-face (piano)	3.6
	Face-to-face (mixed instr.)	11.67
	Online	13.6
Modelling	Face-to-face (piano)	40.2

¹⁶ Modelling refers to an instrumental teaching technique in which the teacher demonstrates on their instrument with the intention of the pupil joining in.

Behaviour category	Lesson type	Percentage % (mean)
	Face-to-face (mixed instr.)	8.02
	Online	12.5

Table 12: Online versus face-to-face teacher behaviour

We decided to take our analysis of the categories within the lessons to compare how much time for the pupils was actually spent playing music between online and face-to-face lessons; no such analysis was conducted by Simones et al. but we are able to use the data we collected from the face-to-face lessons. Although we had a smaller sample size of face-to-face lessons (3) compared with the online lessons (9), we observed there did not appear to be any significant difference between the amount of time the child spent making music (see Table 2 below), whether ‘playing’ or ‘singing’.

Lesson type	Instrument	Child plays %	Child sings %	Total
Face-to-face (mean)	Guitar/Clarinet/ Violin	20.52 (SD = 10.24)	2.96 (SD = 3.33)	23.48 (SD = 6.93)
Online (mean)	Guitar/Clarinet/ Violin	21.51 (SD = 9.12)	0.19 (SD = 3.28)	21.63 (9.18)

Table 13: Time spent making music between face-to-face and online lessons

Environment

There were a number of environmental issues that arose during the course of the video analysis and interviews. These can be broadly described as:

Rooms with multiple functions: Some lessons took place in rooms that needed to be accessed by others during the session. This included

using a photocopier and the room being used a thoroughfare to other places in the school.

The size of the room: Small rooms had issues with not being able to position the cameras far enough away (see Figure 9) to fully see the pupil, while larger rooms had problems with reflections that caused a lessening in audio quality.

Noise spillage: Lessons that took place during break time near playgrounds had problems with noise spillage onto the audio feed, and noise from adjacent rooms also caused concerns on occasion.



Figure 9: Example of small room causing problems with fitting pupil into overall view

These rural schools are often challenged in terms of the size and space that can be given over to this type of activity. However, by making schools aware of the issues surrounding this type of delivery it is anticipated that this can be kept to a minimum. It is important to note that rooms used for online lessons would be the typical rooms used for face-to-face lessons.

Impact

Overall, the project received a positive response from the teachers, pupils, and head teachers involved. In addition, other spontaneous feedback was received from school governors:

'The children were engrossed in what they were doing...we are all very impressed with the concept... As a governor I feel there are huge opportunities offered through the internet for geographically remote schools, small schools with very limited budgets (like ours) and also for specialised teaching, not just of music but of foreign languages... In short – brilliant project well executed.

Kevin Tasker, School Governor, Hawes CP School

It would also appear the pupils made good progress when we asked the teachers:

'Really good, actually [...] especially the individuals got further than they would in a normal lesson. I think it was because of the kids, I think they really liked doing it over the internet'.

Andy, guitar teacher

There were other positives drawn from the interviews concerning travelling between different schools to teach:

'Well, the organisation of it, if the schools on board, it's so much easier [...] North Yorkshire being massive and travelling and not getting there, so actually having lessons [...] rather than running from school to school [...] that was great, in the office, I couldn't get stuck in traffic.'

Daniel, woodwind teacher

But there was also feedback from teachers to suggest some felt they could be more effective in a face-to-face environment:

'Because I'm able to hear and see subtle differences, sometimes the visual or the sound is more information I can react [to] or provide feedback [to], or inform my instruction for students, and therefore it's easier to get what I want quickly.'

Daniel, woodwind teacher

Head teachers were also interviewed as part of the study, who touched on the issue of accessibility to instrumental music lessons a number of times:

Because we're so very small and rural and I think it's important to give every child that opportunity to have instrumental lessons and that's what's so very difficult in a small school – [you need a] group of three that want to start. If you have just one child who wanted to play the guitar it's not economically viable to send a teacher'.

Claire, music coordinator, Goathland School

Views concerning the project were also expressed by one of the stakeholders, who suggested a blended approach (both online and face-to-face) could be the way forward:

'And I think that has real potential there [for online], in an ideal world [...] a combination of both, [an] initial [face-to-face] meeting with the teacher [...] then maybe four or five lessons over the internet, and then you have another [face-to-face] meeting, [...] I think it's got real potential for [...] providing opportunity for those kids that can't, or are not sure about whether they want to do an instrument, to actually make a start.'

Ian Bangay, head, North Yorkshire County

Council Music Service



Figure 10: North Yorkshire school pupil

Source: Sam Atkins

Discussion

Although there were some technical issues during the project, many of the more minor problems were eradicated during the short trial period. The time lag for the audio stream presents a challenge but the project team understands that applications are under development to minimise this. What has been discovered from a pedagogical perspective will inform future work and has assisted the development of support materials for teachers as a legacy arising from the project, available at www.nymaz.org.uk/connectresound. The environmental challenges could be problematic for small rural schools since space can often be at a premium during the school day. However, by making teachers and schools aware of the potential challenges it is anticipated that the impact can at least be managed.

The project has clearly been successful given that the lessons were delivered, pupils concentrated well and reported enjoying the tuition, and pupils were observed by parents and teachers to be making good progress in their musical learning.

Feedback from stakeholders suggests this has been a valuable addition to music learning for the schools involved in the project. Although there are some differences in how teachers deliver lessons online, what has been demonstrated is that they are able to adapt their approach to teaching to suit this particular medium.

Four approaches were trialled during the project and the research team would initially recommend that schools and Music Hubs adopt two of these:

- Skype (school) to Roland VR-3EX (Music Hub)
- Roland VR-3EX (school) to Roland VR-3EX (Music Hub).

What is also evident from the research is that a simple two-camera setup (as opposed to the three cameras used in the pilot – one overall view of the teacher, and the other enabling close-ups) would be an effective way to deliver the lesson. The camera views could then be switched between an overall and a close-up view, with the latter used primarily for teaching aspects of instrument technique.

Although the cost of setting up the Roland VR-3EX technology at the school location is relatively low, it may prove prohibitively expensive to schools on small budgets. We would therefore suggest that Skype with an external webcam and microphone could deliver an effective lesson for learners. However, where it is possible for schools to invest in the technology, the flexibility of having multiple camera angles (especially for group lessons) is clearly beneficial.

Music Hubs could be delivering a greater number of online lessons from their geographical base, making their investment in the VR-3EX technology more cost-effective.

Information provided by North Yorkshire County Council Music Service indicated that:

- £77,000 is spent annually on mileage allowance for teachers
- In a typical teaching week, 980 hours were spent on face-to-face delivery of instrumental lessons
- A further 139 hours per week were spent on teachers travelling from school to school. This equates to 4.2 full-time members of staff.

There are therefore potential savings, both in terms of economic costs and time spent for teachers travelling between schools. Currently, lessons take place at a school only when a certain group size has been achieved, because of economies of scale. The approach used in Connect: Resound means that even if a single child wants to study a particular instrument, it would be no less cost-effective than a face-to-face instrumental lesson in a school with multiple pupils. Hence, access to music can be increased in these remote areas.

We would also recommend that consideration is given to the environment that the lessons are delivered from to ensure a reasonable

acoustic and a fibre-optic broadband connection. If it were possible to setup a number of Music Hubs across the country in this way with specialist online music tuition facilities, the Hubs would have the potential to reach a greater number of pupils and widen access to music education.



Figure 11: North Yorkshire school pupil
Source: Sam Atkins

Insights

Technical insights

There are three main areas of insight in relation to technical issues: selection of equipment, use of equipment, and issues associated with learning from the project and making recommendations for others.

Selecting equipment

At a technical level, the project built on work done by UCan Play with the Roland Systems Group, notably exploring the educational potential of the VR3 (now VR3-EX) in an educational setting for teaching, the quick and easy preparation of curriculum resources and the live streaming of school events such as school concerts and graduation events. At the time (and this is still the case), the VR3-EX is currently the only 'all in one' audio and video mixer on the market at its price point. The selection of the VR3-EX was relatively straightforward given previous knowledge of the product, its reliability and price.

One challenge was to try to find a suitable video camera for use with the Roland VR-3EX video mixer and streamer for use within instrumental music teaching lessons in remote locations across North Yorkshire. Budgetary constraints meant that the camera proposed by the manufacturer (a Go Pro camera) was beyond the financial means of the project. However, on further investigation the Go Pro and other cameras included many features unnecessary for the proposed use, i.e. to live record footage onto physical storage within the camera wasn't needed.

Our solution was to source a camera from a very different market sector, the security and surveillance market, and, in particular, a camera that would normally be found within CCTV networks. This camera was significantly cheaper (around a quarter of the price) and less likely to confuse participants with unneeded functions, making it easier to use. We were subsequently able to procure all the cameras that were required within the proposed budget.

This decision came about due to some lateral thinking by the consultant employed within the technical lead organisation. His eye for detail and ability to think outside and beyond product categories led him to source

an alternative camera that is highly suited for the intended purpose and is, to our knowledge, the first application of this type of camera within an explicitly educational setting such as that being considered within the project.

Other technical elements of the solution were relatively straightforward, although the quality of microphones is an essential component in a successful online music teaching environment. The Rode microphones used within the project were high quality at an intermediate price point. We would counsel against cutting corners and using cheaper, inferior products.

As discussed above, the focus of Connect: Resound was to investigate accessible, cost effective methods of delivering musical education experiences remotely, using digital technology. The agreed model for delivering instrumental learning to schools via the internet proposed Skype (in addition to specifically designed hardware to enhance the audio visual quality) as a free to access, universally available software.

This was not without its problems. Project teachers were employed by the music service and based at their offices on local authority premises. All schools had been supported by the project technical team to setup Skype accounts with no issues. However, when we came to install the hardware in the Music Service base, with under two weeks to go before project launch, we discovered that the local authority protocols and firewalls did not enable Skype to be installed. We discovered that a number of local authorities have such protocols in place, and were asked to consider alternative video conferencing solutions. However, these lacked the free and universal availability of Skype thus compromising would have compromised the underpinning vision of the project. This was ruled out. We explored alternative venues but they did not have the flexibility we required and the expense of daily room hire over several weeks would have been prohibitive.

After a lot of negotiation and very hard work on the part of the local authority IT team, as well as the music service and the research and technology partners, technical solutions were found to enable us to use Skype securely onsite. Perseverance and tenacity have proved key behaviours required to solve technical challenges.

Use of equipment

The VR-3EX has proved robust and reliable throughout the project, being used over 196 teaching hours without fault. Participants also reported that it was straightforward to use. CCTV cameras were also used effectively with only one technical fault (due to fragile wiring within the camera). There were no reported issues with microphones.

The weakest part of the solution was Skype. This caused a number of issues throughout the project. Despite the relatively low up-stream requirements of the VR3-EX (less than 1Mbps), the large demands made on wireless networks within schools has caused problems in the broadcast's transmission and reception. At key moments within the project, see below, this has caused us to consider alternative hosted solutions. However, we have persevered with the proposed solution and seen improvements over time.

As part of our commitment to the project, we streamed three live events from various locations across North Yorkshire. One of these featured a band streaming from an unusual location - a rehearsal studio in a crypt beneath a church in West Yorkshire - without a wired broadband facility. Until this event the VR3-EX had only been used with a wired connection (Ethernet) to a broadband router.

To overcome this challenge, we researched 4G mobile-phone solutions for streaming live video. This provided us with a Wifi hotspot and this proved to be a workable solution. The broadcast went ahead in late March using the 4G connection and the up-load, down-load stream provided by the 4G connection was significantly above minimum requirements of the technology and also better than many wired connections that we had been using in the project to that point.

This was an exciting development from our point of view. Although 4G coverage in the UK is still patchy, where available it provides a significant if not better way to broadcast with technologies such as the VR3-EX. The opportunity to broadcast using the VR3-EX with an external battery pack and 4G connectivity means that in areas without broadband there is a viable alternative and also outside and location broadcast is possible for live, multi-camera video streaming.

During the project we also noted that YouTube had made significant advances on the streaming of live video, including the support of 360 video. Whilst technological developments continue to move on apace, it is important to remember that this project explored the VR3-EX and its potential as a multi-camera mixer and streamer. This is still something that is difficult to achieve unless you have a very powerful PC, multiple capture cards and sophisticated software. The setup and training required to deliver this solution would still be well in advance of the skills of most teachers. The simplicity and ease of use of hardware solutions like the VR3-EX are significant and beneficial for this sector. We have been impressed with the way that teachers have engaged with the solution we have created with minimal training and little additional support.

In terms of the use of equipment, we have been genuinely impressed with teachers, and others, desire to explore how these technologies can be used efficiently and effectively within the teaching episodes and the live performance broadcasts. Relatively straightforward elements such as handling a video camera and 'capturing' live video for streaming has been embraced enthusiastically by staff. For example, the Hope and Social broadcast utilised a fixed camera and a roving camera, manned by a NYMAZ worker.

During the broadcast, the band and the camera operator were moving around the already-confined rehearsal area quite a lot. The camcorder's wires became a trip hazard, not least when they became tangled in all the other wires and equipment that come with a busy studio. Having more experience with aspects such as how long to focus on particular elements of the performance, moving around the space and checking the light levels and so on would have helped us to improve the audience experience even more.

In a multi-sector partnership, the more the non-technical members of the team are closely involved with actually creating the broadcasts, the more the team as a whole can learn about what does and does not work and can have more useful and in depth conversations about how to prepare for such events and what we can do to make sure we have the skills and practice under our belts. Time must be put aside for rehearsing and testing with the equipment. There will always be a demand for

professional support to facilitate live broadcasts, and it is important that the particular needs of this form, and the requirements of audiences and performances, are honoured and central to the process. However, as the technology becomes more affordable, and new and existing generations with digital native level skills in recording moving image join the workforce, the possibilities for organisations to be more informed clients of their broadcast partners, and/or broadcast work themselves, directly to their audiences, are growing, and it has been exciting to explore what can be done at a very different end of the market. As mentioned earlier the appetite for by others to learn how to use the equipment gives the opportunity to develop skills 'in-house'.

Moving forwards and recommendations for others

During the project, the technical partner has reflected on the technical solution that was offered to the project. We wanted to ensure that we could give good advice to the project team and other interested parties moving forwards as the project comes to an end and the outputs are disseminated.

As we have discussed already, technology always moves on apace. During the project we have become aware of other technologies and technical solutions that might impact on the best advice that we can give. As the research described above has shown, we have also gained a detailed understanding from the end users of the technical solution that we have implemented. These twin prompts have caused us to reflect on how live streaming within an educational context can be promoted and developed through a cost effective technological solution.

We reviewed and evaluated the tools that were used within the existing project's technical solution. The choices we made were with a consideration of the end user in mind. Instrumental teachers have precious little time to set up technology in advance of teaching, they often have minimal technical skills in areas outside of basic music technologies, and the equipment itself needed to be robust and easy to manage.

From our perspective, the project has proved that these tools are fit for purpose. There has only been one technical issue associated with the power lead of one CCTV camera. A relatively sophisticated technology

such as the VR3-EX has proved easy for project participants to use with little reported difficulties. Audio quality from the Rode microphones has been excellent. The video quality from the cameras has been generally good, and certainly good enough for the intended purpose, but there have been comments about the quality of the image on occasions that have led us to consider other options.

The availability of HD cameras providing a live or recorded stream at 1080p are coming down in price. However, they are still going to cost significantly more than the £95 cameras used for this project (typically starting at around £250 each). The VR-3EX itself cannot cope with true HD quality either. The next level 'up', the VR-50HD, is significantly more expensive (around £6000 compared to £1350). Our view is that these significantly higher quality pieces of equipment (in terms of their image at least) are not justified in the near future for live streaming in an educational environment.

During the lifespan of the project, we have also developed our knowledge of other live streaming solutions typically involving a computer, multiple HD webcams, sophisticated capture and streaming software (such as Open Broadcaster) and hardware interfaces. These are an emerging technology and it is certainly possible to imagine a solution built around these components. However, the technical knowledge need to build such a system, maintain it, and train non-specialists in its use (and support them in an ongoing capacity) would be extensive. We do not consider that these solutions offer a productive end user experience at the current time. The VR-3EX, even with a few limitations, does provide a bespoke and specialised technology that is easily accessible and robust, minimising down time and distractions for busy teachers.

Finally, we should comment on the fragility of Skype as a medium for live streaming. This has been the cause of several problems throughout the year. Skype, as we know, is a free service but, as such, has its limitations. We would recommend that schools, music services and teachers consider a hosted service in order to provide a more stable and reliable upstream and downstream speed for these educational activities. Skype has not proved as reliable as we would have hoped in

these respects and time outs have been relatively frequent and frustrating for project participants.

Project management insights

We noted a range of insights within the project related to our partners and the specific contexts within which they work, our own internal communications strategy, and our emerging ideas about how to disseminate the project's findings.

Working with busy schools

The challenge of balancing a fixed term research project with the reality of the delivery partners' contexts is a perennial issue for arts projects in educational settings. When is the right time to involve the end delivery partner? Too early and you are asking busy people to engage with an unformed project idea that they may not ultimately be involved in. This has the potential to take up their valuable time and energy in a conversation that can feel too unformed, and at that stage, irrelevant, to be worth their time and expertise. Too late, and the project design or timetable is not appropriate for its context, and too many sacrifices are made that render the project unworkable and not useful, relevant or enjoyable for the participants. In our project, the first seven schools were approached in the summer term of 2014, with intensive follow up communication from September following the summer vacation.

Schools were asked to find space within crowded busy buildings, and crowded busy timetables, to accommodate a project which required four hours of their time each week, including a dedicated space and member of staff. They are asked to identify ten pupils to take on an additional, or begin from scratch, forty minutes of instrumental tuition a week. At that point, we were not able to tell them which instrument their students would be learning, or exactly how they would be taught, but we did know the teacher would be many miles away, communicating via a video screen in a context which demands the building up of trust, and a complex physical, emotional and psychological interplay between student and teacher. The demands of the curriculum, significant time factor involved, competing subject priorities within the school strategy and fear of the unknown all had the potential to impact negatively on take up.

However, we are pleased to note that the teachers we have worked with have been unfailingly flexible, collaborative, enthusiastic and excited about participating in something that they feel could make a real difference to the issues they face in providing music education opportunities to their young people.



Figure 12: Technology in use

Source: Sam Atkins

Timetabling and scheduling restrictions

Throughout the project there has been a need to maintain responsive to the changes in the workforce, particularly in relation to the music teachers who often have to balance their professional playing careers alongside their teaching commitments.

For example, in the first week of the project, one teacher found that she would be unable to deliver one of the planned weekly sessions, from the following week, leaving the project with a potential gap in the teaching timetable. There was no-one else on the music hub team who could cover this session. Therefore, as a matter of urgency we set about recruiting a replacement teacher, targeting other neighbouring music hubs and other teacher contacts. The teacher needed a high level of

experience and ability, to be available at no notice, and to participate in training to ensure that they knew how to use the technology and deliver teaching effectively online. Happily, an experienced and enthusiastic teacher was able to take over the classes, and was enthusiastic about the overall project and its vision.

In this case, the member of staff was embarking on a change of career and needed this time to attend interviews and auditions in London. The nature of employing professional musicians with a mixed portfolio of work and a varied practice, at different stages in their careers, means that these changes in availability do arise for music hubs. However, as this project is an intensive one, with specific logistical challenges around availability of the technology, and school timetabling issues, solutions such as a short gap in teaching, changing the lesson time etc, did prove difficult.

As a tightly scheduled research project with two cohorts, there was no option to delay lessons, and losing the lessons altogether was not an option either. Apart from breaking trust with the school, it would also have meant the data for the research project was incomplete.

The digital technology also created scheduling issues that made it difficult to change the time of lessons, thus further reducing the available teacher pool. Tuition is delivered using a hardware package that ensures the audio-visual experience is comparable to face to face tuition, including the Roland VR-3EX video mixer and streamer. Whilst this was sourced as cost effectively as possible, the music service only has one onsite, so only one digital lesson took place at any one time. Equally, the school needed to set aside physical space to set up and use the equipment, and lessons needed to take place at an appropriate time and when a teaching assistant was available to supervise the pupils. Bearing these circumstances in mind, replacing the teacher in the above example was more difficult than it would have been for a music hub in more regular teaching circumstances.

Blended communications

The opportunity to meet together physically, together with other forms of online communication, has helped the project team work together constructively throughout the year. The learning events that we have

attended during the year have been very helpful in bringing us together, challenging our thinking and promoting new avenues for further exploration within the project.

We held a final project sharing event, a useful way to ensure that everyone involved in the project had the chance to collectively reflect on, and make plans to build on, the successes and learning points of the project. It may be useful to consider holding similar events at the start of future projects like this, where teams and working practices are so diverse.

Looking ahead

As the Connect: Resound project has come towards the end of its first year, our attention has turned to dissemination. Central to this has been a discussion with partners about how the Connect: Resound model of online instrumental tuition would continue to be implemented as part of the North Yorkshire Music Hub's business model now that a legacy of skills and equipment has been left by the Digital R&D Fund for the Arts grant.

A variety of applications were discussed, and it has become apparent through discussions that some Music Hubs across England may find taking up this new model of remote instrumental tuition challenging without more intensive support, such as that received by the North Yorkshire Music Hub. Many Music Hubs are still negotiating new governance models and ways of partnership working, as well as dealing with severe Local Authority cuts and the need to raise additional income, leaving them little time to explore innovative delivery methods for core roles.

Therefore, we agreed as a partnership that additional funds should be sought to enable us to pilot the Connect: Resound model in a small number of Music Hubs operating in rural areas in the first instance. By subsidising equipment, providing specialist training, piloting online tuition and supporting Hubs to integrate the approach into their individual business plans, we would aim to thoroughly embed Connect: Resound in participating Hubs and build up a 'head of steam', which will in turn help to promote online tuition as an effective solution for others.

Future

This project has demonstrated that online peripatetic music lessons can offer a cost effective way to increase access to music for learners. There could also be wider implications for schools by increasing quality access to specialists remotely, Support for other areas such as modern languages could also be explored. It would also be useful to share practice and collaborate more closely with others undertaking similar work, notably Dumfries and Galloway Council, which has been delivering online music tuition since 2004.

Connect: Resound took place in North Yorkshire which is England's biggest county and an area with a high number of rural communities. However, there are a number of other locations in England (and the UK) in which Music Hubs are presented with a similar set of challenges in providing music education for learners. In heavily populated urban areas this form of delivery may have benefits for schools and teachers by providing another service for pupils to access music.

Access to adequate internet connections remains the key challenge for the further dissemination of the Connect: Resound approach. The Government's Superfast Broadband programme (part of the wider Broadband Delivery UK programme) aims to provide superfast broadband (speeds of 24Mbps or more) for at least 95% of UK premises by 2017 and universal access to basic broadband (speeds of at least 2Mbps) by 2016 with a total public investment to date of around £1.7bn.¹⁷

There has recently been significant press coverage about the frustrations of those living and working in rural areas about the reality of their limited access to high-speed broadband compared to the ambitions and projected delivery dates of the Superfast Broadband programme.¹⁸

A new inquiry by the House of Commons Select Committee for the Department of Culture, Media and Sport (DCMS) 'Establishing world-class connectivity throughout the UK' – has been launched to look at the coverage, delivery and performance of superfast broadband in the UK,

¹⁷ <https://www.gov.uk/broadband-delivery-uk>

¹⁸ For example: <http://www.ft.com/cms/s/0/ce80cd56-4029-11e5-9abe-5b335da3a90e.html#axzz3ial7EhGt>

and what needs to be done in order to connect the most remote areas - the final 5% of premises.¹⁹

The screen casting software used by the research team could provide an opportunity to expand the approach used by teachers when using online delivery. The ability to capture a live lesson so that both teacher and pupil had a video record could serve as a practice aid for students and a reflective tool for teachers.

When Music Hubs consider music lesson delivery one of the challenges identified in Connect: Resound was access to specialist teachers and the problems with commuting between schools. If Music Hubs could share information concerning music specialists there is an opportunity to share teaching experience at a national level and beyond. If lessons were to take place online then the geographical location of the teacher need not be an issue. The regional hubs could manage the process and scheduling of lessons and would have the advantage of drawing upon a national database of approved expertise.

The project partners are currently looking at recruiting more Music Hubs so that this method could be rolled out over a wider geographical area. Now that the technological challenges are understood more fully a more focused investigation of the pedagogical challenges could be carried out. These could include the following:

- Working with children with special educational needs and disabilities;
- Moving beyond music and using online technology to deliver specialisms to schools in different subject areas;
- A longitudinal case-study over a longer timescale (i.e. a year) to see how pupils progress using online learning;
- The creation of specialist facilities at regional centres for teachers to deliver online lessons; and
- Setting up a national database of teachers trained in online instrument lessons.

¹⁹ <http://www.ispreview.co.uk/index.php/2015/07/select-committee-starts-inquiry-into-uk-superfast-broadband-strategy.html>

- Practice sharing with other authorities undertaking online distance learning of musical instruments, notably Dumfries and Galloway

In terms of dissemination of the existing research findings, two international conference papers have been accepted: Research in Music Education (April, 2015) and the European Society for the Cognitive Sciences of Music (August, 2015). Further submissions will be made to Music Expo (March, 2016) and The International Society for Music Education (July, 2016). Draft journal articles are being prepared for submission to publications of international standing and will be submitted in September 2015.

Further Resources

Further project information

Connect: Resound: <http://www.nymaz.org.uk/connectresound>

Roland UK: www.roland.co.uk

Rode Microphones: www.rodemic.com

UCan Play: www.ucanplay.org.uk

Superfast Broadband availability in rural areas

Superfast Broadband Coverage in North Yorkshire:

http://www.northyorks.gov.uk/media/28476/Superfast-broadband-in-North-Yorkshire---revised-coverage/pdf/Superfast_broadband_in_North_Yorkshire_-_revised_coverage.pdf

Select Committee announces new inquiry:

<http://www.ispreview.co.uk/index.php/2015/07/select-committee-starts-inquiry-into-uk-superfast-broadband-strategy.html>

Tools and guidance

Video-streaming technology

We used the VR-3EX throughout this project. Further general information about this product can be found here:

[http://proav.roland.com/products/vr-3ex/.](http://proav.roland.com/products/vr-3ex/)

The VR-3EX Owner's Manual can be found here:

<http://roland.com/support/article/?q=manuals&p=VR%2D3EX&id=63077772>

The VR-50HD is Roland's higher end HD multi-format audio video mixer with web streaming and recording capabilities. It offers a broader range of functionality than the VR-3EX and also true HD streaming. Further information about this product can be found here:

[http://proav.roland.com/products/vr-50hd/.](http://proav.roland.com/products/vr-50hd/)

Throughout this guide we have mentioned the opportunities to build a custom computer to help stream live video from multiple cameras. This is not for the faint hearted! However, there are a number of products available that will allow you to do this. One of the most popular companies is Blackmagic Design and their product DeckLink allows for video capture and playback:

<https://www.blackmagicdesign.com/products/decklink>. We are not promoting this brand. Other similar products are available from other manufacturers.

Since we began the project, YouTube have increased their functionality to include the opportunity to broadcast live events. Like any technology, there are pros and cons here. But further information is available here:

https://www.youtube.com/my_live_events. A full user guide for live streaming events on You Tube is available here:

https://support.google.com/youtube/topic/2853712?hl=en-GB&ref_topic=4355169. Please note that in order to set this you will need a significant hardware infrastructure and a considerable amount of technical knowledge, including knowledge of ingestion settings, encoders, bit rates, resolutions and more besides.

Whatever hardware solution you choose, you will need to also think about a software environment for the handling of video and audio streams. This is something that the VR-3EX manages through its own software and the USB interface with your PC. If you are wanting to build your own system (without the VR-3EX), software such as Open Broadcaster could be used (its a freeware product):

<https://obsproject.com>. Other commercial solutions are also available but they tend to be very expensive.

Microphones

Throughout our project, we used Rode's NT5 and Smart Lav + microphones. Here are the links to the key product pages on the Rode website:

NT5: <http://www.rote.com/microphones/nt5>

Smart Lav +: <http://www.rote.com/microphones/smartlav-plus>

Rode have a very good web interface that allows you to experience the 'sound' of different microphones in different contexts. Their Soundbooth Studio allows you to hear how different microphones sound for different instruments or voices. Further information from here:

<http://www.rote.com/soundbooth>.

The placement of microphones is simultaneously straightforward and highly complicated! At one level, you put microphones wherever they sound good to you! At another level, the subtleties of each microphone, the room, the musician and instrument all impact on how they could be used effectively. There are numerous guides on the Internet. This video shows you how to set up a pair of stereo microphones in a range of formations that are applicable to the use of the NT5 microphones that we have used throughout the project:

https://www.youtube.com/watch?v=roTG_uM17JE.

References and Further Reading

Academic articles

Kruse, N and Veblen, K (2012). 'Music teaching and learning online: Considering YouTube instructional videos'. *Journal of Music, Technology & Education* 5:1, 77-87.

Kruse, N, Harlos, S, Callahan, R and Herring M (2013). 'Skype music lessons in the academy: Intersections of music education, applied music and technology'. *Journal of Music, Technology & Education* 6:1, 43-60.

Pike, P and Shoemaker, K (2013). 'The effect of distance learning on acquisition of piano sight-reading skills'. *Journal of Music, Technology & Education* 6:2, 147-162.

Waldron, J (2012). 'Conceptual frameworks, theoretical models and the role of YouTube: Investigating informal music learning and teaching in online music community'. *Journal of Music, Technology & Education* 4:2/3, 189-200.

Other reading

‘Classical Live Offers Orchestras Another Internet Stage’:

http://www.nytimes.com/2015/06/16/arts/music/classical-live-offers-orchestras-another-internet-stage.html?_r=1

Gone In The Air: <http://www.nymaz.org.uk/news-and-views/post/gone-in-the-air-summary-of-findings/>

Music Education in England: a review by Darren Henley for the Department for Education and the Department for Culture, Media and Sport: <https://www.gov.uk/government/publications/music-education-in-england-a-review-by-darren-henley-for-the-department-for-education-and-the-department-for-culture-media-and-sport>

The Importance of Music - A National Plan for Music Education: <https://www.gov.uk/government/publications/the-importance-of-music-a-national-plan-for-music-education>

National Foundation for Youth Music: <http://www.youthmusic.org.uk>

Other examples

ArtForms: <http://artsdigitalrnd.org.uk/projects/artforms/>

Cambridge Junction: <http://artsdigitalrnd.org.uk/projects/cambridge-junction/>

Clapping Music: <http://artsdigitalrnd.org.uk/projects/london-sinfonietta/>

Edinburgh Napier University and the Royal College of Music (RCM) demonstrate the power of the Janet network in supporting collaborative performances across remote locations:

<https://www.jisc.ac.uk/news/musical-demonstration-transcends-geographical-barriers-thanks-to-advanced-network-27-nov-2013>

Eric Whitacre’s Virtual Choir: <http://ericwhitacre.com/the-virtual-choir>

Ministry of Stories: <http://artsdigitalrnd.org.uk/projects/ministry-of-stories/>

Miracle Theatre Company: <http://artsdigitalrnd.org.uk/projects/miracle-theatre-company/>

Online Orchestra: <http://onlineorchestra.com>

The National Piping Centre's Online Lessons:

<http://www.thepipingcentre.co.uk/bagpipe-education/online-lessons/>

Video Nation's case study from Dumfries & Galloway:

<http://www.videonationsltd.co.uk/about/customers/dumfries-galloway/>

WithWholeWorldBand: <https://www.wholeworldband.com>

Soundtrap - online music collaborations <https://www.soundtrap.com>

Appendix 1

Equipment list

Full Kit (Roland VR-3EX, 3 cameras, 3 mics)

- 3 x Cameras
- 3 x Camera power lead
- 3 x Camera video lead
- 1 x Full size tripod
- 2 x Desk tripods
- 1 x Smart Lav kit (microphone, TRRS to TRS adapter, extension lead, mini-jack to XLR converter)
- 1x Pair of Rode microphones in hard case
- 2 x microphone stands
- 2 x XLR microphone leads
- 1 x 6-socket plug board
- 1 x Roland VR-3EX in box (including power lead and USB cable)

Skype-only Kit (PC and webcam)

- 1 x Pre Sonus headphone amp in box (including power lead and audio lead)
- 4 x Senheiser headphones
- 1x Webcam

Appendix 2

Detailed data tables relating to bar charts in report:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bad	2	2.9	3.0	3.0
	OK	19	27.1	28.4	31.3
	Good	39	55.7	58.2	89.6
	Very good	7	10.0	10.4	100.0
	Total	67	95.7	100.0	
Missing	System	3	4.3		
Total		70	100.0		

Table 1: How good was the sound quality?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bad	2	2.9	3.0	3.0
	OK	45	64.3	67.2	70.1
	Good	14	20.0	20.9	91.0
	Very good	6	8.6	9.0	100.0
	Total	67	95.7	100.0	
Missing	System	3	4.3		

	Frequency	Percent	Valid Percent	Cumulative Percent
Total	70	100.0		

Table 2: How good was the video quality?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bad	9	12.9	13.4	13.4
	OK	35	50.0	52.2	65.7
	Good	19	27.1	28.4	94.0
	Very good	4	5.7	6.0	100.0
	Total	67	95.7	100.0	
Missing	System	3	4.3		
Total		70	100.0		

Table 3: How good was the internet connection?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rarely	2	2.9	3.0	3.0
	Sometimes	15	21.4	22.4	25.4
	Most of the time	41	58.6	61.2	86.6
	All the time	9	12.9	13.4	100.0
	Total	67	95.7	100.0	

		Frequency	Percent	Valid Percent	Cumulative Percent
Missing	System	3	4.3		
Total		70	100.0		

Table 4: Were you able to hear what the teacher was saying?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rarely	2	2.9	3.0	3.0
	Sometimes	7	10.0	10.4	13.4
	Most of the time	34	48.6	50.7	64.2
	All the time	24	34.3	35.8	100.0
	Total	67	95.7	100.0	
Missing	System	3	4.3		
Total		70	100.0		

Table 5: Were you able to see what the teacher wanted you to do?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A bit	9	12.9	13.4	13.4
	Quite a lot	11	15.7	16.4	29.9
	Very much	47	67.1	70.1	100.0
	Total	67	95.7	100.0	
Missing	System	3	4.3		
Total		70	100.0		

Table 6: How much did you enjoy the lessons?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not much	13	18.6	29.5	29.5
	A bit	12	17.1	27.3	56.8
	Quite a lot	8	11.4	18.2	75.0
	Very much	11	15.7	25.0	100.0
	Total	44	62.9	100.0	
Missing	System	26	37.1		
Total		70	100.0		

Table 7: How much would you like your child to continue with instrumental lessons over the Internet?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not much	2	2.9	4.5	4.5
	A bit	8	11.4	18.2	22.7
	Quite a lot	11	15.7	25.0	47.7
	Very much	23	32.9	52.3	100.0
	Total	44	62.9	100.0	
Missing	System	26	37.1		
Total		70	100.0		

Table 8: How much would you like your child to continue with instrumental lessons in the same room as a teacher?

Glossary & Abbreviations

App	A self-contained piece of software designed to fulfil a particular purpose
CCTV	Closed circuit television camera
Downstream speed	The time it takes to receive incoming data from the internet on a computer (eg receiving emails, watching
	downloading files, visiting websites, audio/video footage)
Embouchure	Position and use of the mouth and facial muscles when playing wind and brass instruments
Firewall	A security system preventing unauthorised access to or from a computer or network of computers
Latency	Audio latency refers to the delay between the sound being created and heard
Live streaming	The delivery of content, such as audio and video footage, live over the internet
NYCC	North Yorkshire County Council
Skype enabling tablets and devices	Internet based communication software video chat and calls from computers, mobile phones to other similar
TED	A non profit organisation which organises short talks on a range of topics, many of which are live view
Upstream speed	The time it takes to send outgoing data from a computer (eg sending emails, uploading files,
	audio or video footage)

Video/audio mixer and streamer Hardware enabling video and audio
delivered footage to be captured, mixed and and
live from a computer to the internet

Acknowledgements

The project partners NYMAZ, UCan Play, University of Hull and the North Yorkshire Music Hub: lead organisation North Yorkshire County Council Music Service.

NESTA, AHRC and Arts Council England for funding us and supporting us throughout the project.

Carlton Miniott Community Primary School, Dacre Braithwaite CE VA Primary School, Goathland Primary School, Hawes Community Primary School, Kirkby in Malhamdale UVA Primary School, Selby Community Primary School, West Heslerton CE VE Primary School.

Harrogate International Festival, Musicport, Grassington Festival, Hope and Social, Maia, Martin James Bartlett and Professor Colwyn Trevarthen for their contributions to the live broadcast strand.

Chris Strong and Sarah Derbyshire for advising the writing team.



Citation: Johnson, H., King, A., Savage, J., Penn, E., (2015)
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Report' London: Nesta

artsdigitalrnd.org.uk



